EARLY SETTLEMENTS IN JAFFNA

An Archaeological Survey

Ponnampalam Ragupathy



Early Settlements in Jaffna

An Archaeological Survey

Dedicated to the memory of my
grandfather A. Nagalingam (1901-1979)
of Sampantharkandy, Karainagar,
who inspired me to look at culture.

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AN ARCHAEOLOGICAL SURVEY

Ponnampalam Ragupathy, M.A., Ph.D.

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Key to the System of Diacritical Marks

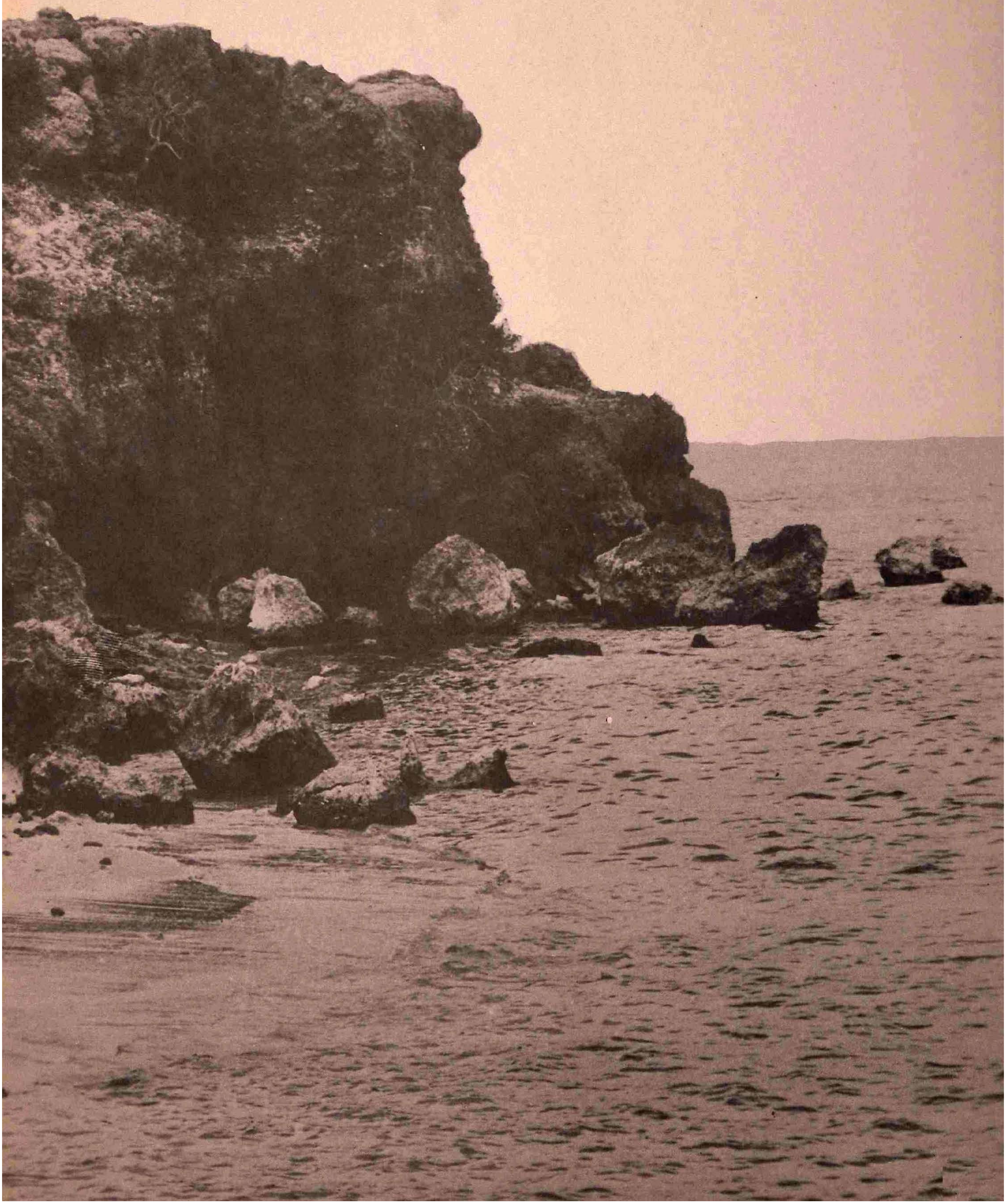
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INTRODUCTION

Plate 1 : *A view of the sand-dune stretches of Jaffna at Maṇalkāṭu, Vaṭamarāṭci.*



Plate 2 : *Limestone cliff along the northern coastline at Kīrimalai. The landscape is around 50′ above mean sea level, which is found to be the highest altitude in the Peninsula*



In keeping with the current definition, if history begins with written documents, then a vast realm of the history of Jaffna should be treated as prehistory, for literary and epigraphical sources are pathetically meagre that very little could be made out of them.

Only two Brahmi legends of pre-Christian date[1] and three written records of early Christian centuries[2] have so far been obtained as objective written documents of the early history of Jaffna.

The historiographical literature of Jaffna, much later in date, originating in the times of the kingdom of Jaffna and later[3], recollects only very vague memories of the early past of Jaffna. Among these are some nebulous remarks on the Katiramalai dynasty that ruled Jaffna, the arrival of the Cō<u>l</u>a princess; and the rule of a blind musician who received this sandy stretch as a gift from a king of Katiramalai.[4] That is about all that one can gather about the early past of Jaffna.

The Anuradhapura - centric Pali chronicles of Sri Lanka on which the authoritative history of the Island still rests, are almost silent about the Jaffna peninsula, except for very occasional remarks like referring to this region as Nāgadīpa and mentioning the construction of certain Buddhist *stupas* there.[5]

In such a situation, only archaeological techniques and methods can come to our rescue to unveil the early past of Jaffna. Archaeological techniques applied in the field of prehistory could be fruitful as prehistory is a discipline in which the story of man is reconstructed in the absence of written documents.

Regrettably, very little archaeological work has been conducted in the Peninsula, perhaps because Jaffna was considered sterile for the classical archaeological studies encouraged by the State in this Island. Only one systematic excavation has so far been conducted on a protohistoric site[6] of the Peninsula by a team from the University of Pennsylvania Museum at Kantarōṭai. Unfortunately, the report has yet to be published.

In this situation, the nature of our research programme was to undertake a comprehensive exploration to locate, study and document the early archaeological sites, which would provide a fundamental source for the archaeology of Jaffna; to extract as much information as possible from their location and from the available artifacts; to piece together the sequence of early Jaffna.

Scope

A question now arises. Why should Jaffna be considered as a distinct unit? Geographically, Jaffna and the adjoining islands form a single unit and strikingly differ from the rest of Sri Lanka.[7] In our view, such a distinctive ecological character could have been possibly responsible for the rise of a homogeneous cultural, social and economic pattern in the Peninsula, with an identity of its own, that later led to the emergence of an independent kingdom. Hence we found it appropriate to select the Peninsula as a microlevel study region for this research.

Regarding the time span covered by the research, we start with the earliest available settlements of the Peninsula which extend to the first millennium B.C.[8] and end with the emergence of the kingdom of Jaffna i.e., the beginnings of the present millennium.[9] Hence in this research the term 'early' covers a wide span of time, including protohistoric times.

However, we do feel that the selection of a particular problem, and a particular region for investigation is not absolutely objective, nor could it be fully explained by reasons mentioned earlier. We are conscious that taking up this microlevel survey with a Jaffna - centric approach and the encouragement and enthusiasm shown from several quarters towards this research, are all kindled by the contemporary actualities and

needs of Jaffna society — the quest for the identity, territoriality and heritage.

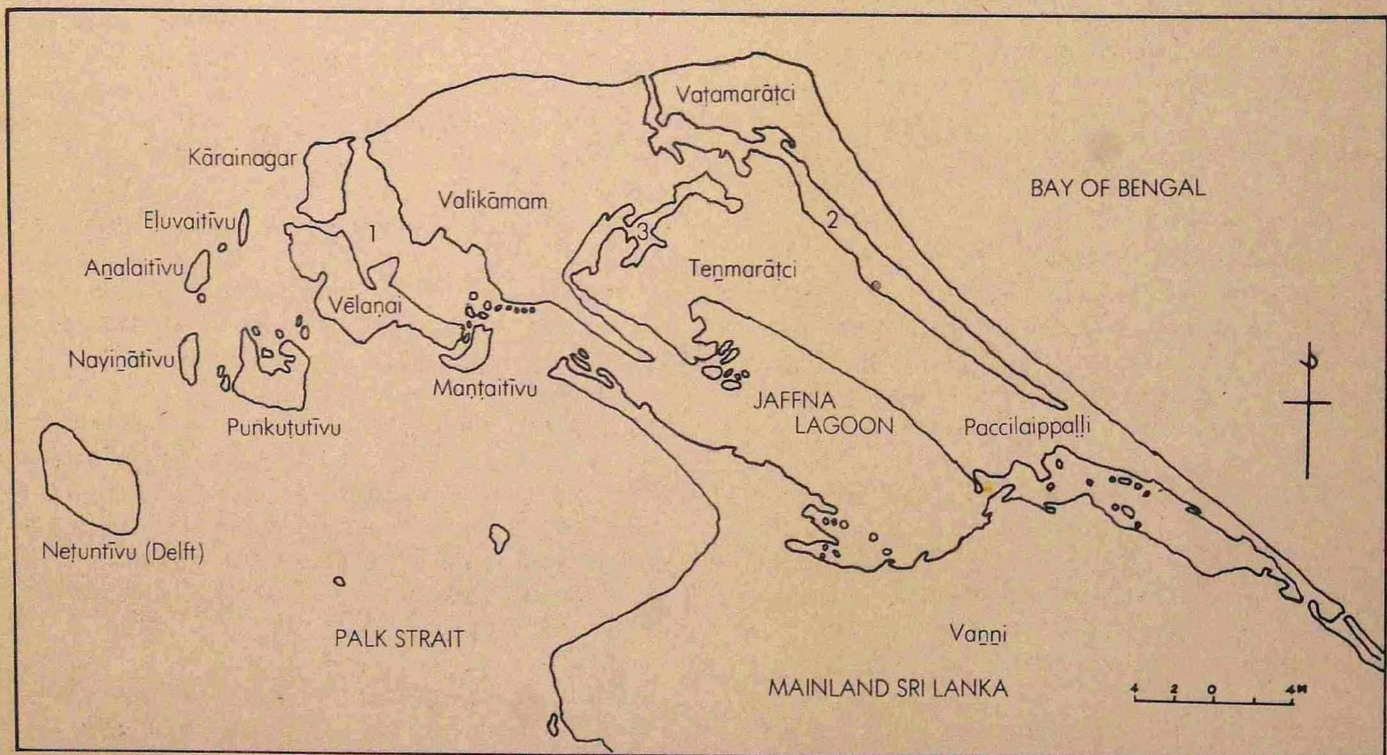
At this point, we being natives of Jaffna are aware of the sub-conscious influences that may have influenced our views, for no historion can be absolutely objective.

Realising these 'limitations' we have adopted an environmental approach throughout the research. We do not favour the idea that archaeological studies are intended to evoke nostalgia for a nation, for a region or for a particular culture. Archaeology enables us to understand the various forces that have shaped the relationship between man and environment in the past. Such an understanding may eliminate superstitions and cultural fanaticism that are nowadays the unwanted products of archaeological studies in Sri Lanka. We believe that if properly channelled, archaeological information and understanding could direct the Integrated Area Development of a particular region.

Above all, we feel that on an altogether different mental plane, any study of the past of man in relation to his environment is capable of breaking through all the barriers and lead one to grasp the dynamics of life.

Method

As the main objective of the research was to first locate the archaeological sites and carry out surface studies, a systematic exploration programme was chalked out. At this stage this research programme coincided with the project for the Archaeological Survey of the Northern Province undertaken by the Department of History, University of Jaffna. The survey was carried out after studying and analysing the topography of the Peninsula through the One Inch sheets, Mosaic sheets and through the Air Photographs available at the University of Jaffna.



1. Jaffna Lagoon 2. Toṇṭaimāṉāṟu Lagoon 3. Uppāṟu Lagoon

Plate 3 : *Jaffna peninsula — its traditional sectors and the adjoining islands.*

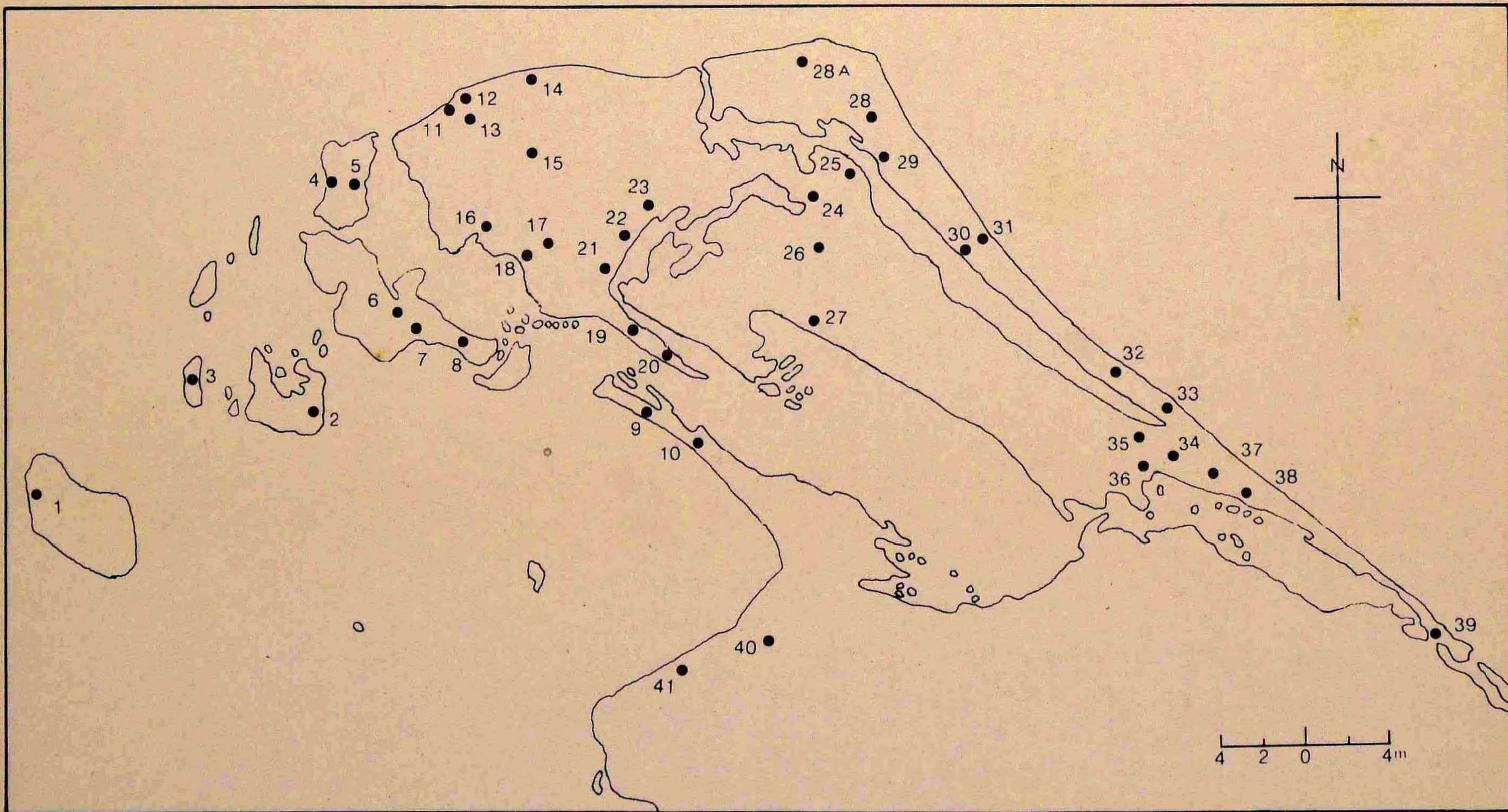


Plate 4 : *Distribution of archaeological sites in Jaffna.*

Key to the Map : 1. Veṭiyaracaṉkōṭṭai; 2. Tikaḻi; 3. Nayiṉātīvu; 4. Vērappiṭṭi; 5. Cattirantai; 6. Kumpuruppiṭṭi; 7. Cāṭṭi; 8. Allaippiṭṭi; 9. Maṇṇittalai; 10. Kautārimuṉai; 11. Tiruvaṭinilai; 12. Ticaimaḻuvai; 13. Kāṭṭuppulam; 14. Āṉaiviluntāṉ; 15. Kantarōṭai; 16. Kalaiyōṭai; 17. Muḷḷi; 18. Āṉaikkōṭṭai megalithic mound; 19. Ariyālai East; 20. Pūmpukār colony; 21. Nallūr; 22. Irupālai; 23. Kōppāi; 24. Kalvaḷai; 25. Paṅkuṉippiṭṭi; 26. Vērakkāṭu; 27. Kaccāi; 28. Vallipuram; 28 A. Tulukkaṉkōṭṭai; 29. Valikanṭi; 30. Nākarkōyil; 31. Karumaṇalkumpi; 32. Tāḻaiyaṭi — Cempiyaṉpaṟṟu; 33. Vettilaikkēṇi; 34. Taṭṭaṉkōṭu; 35. Maṇtalāi; 36. Kōyilvayal; 37. Nittiyaveṭṭai; 38. Kuyavaṉpiṭṭi; 39. Papparavappiṭṭi; 40. Maṇṭakkal Āṟu microlithic site; 41. Pālavikkuḷam.

In the first stage, the coasts of the Jaffna lagoon from Karainagar to Paṇṇai ford were selected for investigation, presuming the possibility of an early sea route through the Lagoon. Encouraged on the first day itself, by the discovery of the Anaikkoṭṭai Megalithic site and later by the discovery of another site at Karainagar, the subsequent stages of the exploration were designed to cover the following regions; (a) from Paṇṇai ford to Elephant Pass; (b) from Elephant Pass to Cuṇḍikkuḷam; (c) the Uppāṟu and Toṇṭamānāru lagoon coasts; (d) the deep sea coasts; (e) the Islands off the Peninsula and (f) the interior areas of the Peninsula.

As this research programme was originally intended to be confined to a surface study of the sites, a questionaire was designed, especially to shed light on the environmental aspects of the location of the sites. The individual locational analyses of these sites, and a total locational analysis after marking these sites on the environmental maps of the Peninsula, were correlated with the artifactual analysis. This has finally resulted in unveiling the non-dynastic history of early Jaffna. The two rescue excavations at Āṉaikkōṭṭai and Kārainagar have greatly enhanced the research programme.

The Course of the Study

I. Several early archaeological sites were brought to light, studied and recorded, through a microlevel exploration, designed and conducted between November 1980 and May 1983. Surface studies and locational analyses were also conducted in the already known sites. Thus a comprehensive exploration covered nearly 46 sites in the Peninsula. These reports, containing pottery lists, other finds lists, pottery drawings, site maps and photographic documentation constituting the bulk of this thesis, are a fundamental contribution to the archaeology of Jaffna.

II. The discovery of Āṉaikkōṭṭai and Cattirantai - Karainagar and the rescue excavations conducted in these sites have for the first time revealed Megalithic burial sites in the Peninsula and have firmly established the existence of a Megalithic phase at the genesis of the cultural heritage of Jaffna.

III. The pottery samples collected from the surfaces of the sites, and the pottery obtained in the two rescue excavations, were put under a typological study, and the overlappings were noticed. This when correlated with the other datable artifacts, established a relative sequence for the archaeological sites, thus providing an infrastructure of chronology for early Jaffna, in the absence of absolute dates.

VI. Little can be said objectively with the help of the already existing sources about the times prior to the kingdom of Jaffna. The locational analysis and the artifactual analysis of the early sites have now made it possible to narrate the history of Jaffna since its inception, in a skeletal form with continuity, though not in terms of dynasties.

V. The following reconstructions were made in this topographical approach highlighting man - environment relationship.

(a) the necessary conditions for the existence of settlements during the successive phases.

(b) subsistence patterns, as revealed by the finds and by the environment.

(c) reconstruction of the settlement pattern including the identification of the central place, settlements with different functions, trade routes, etc.

POTTERY AND CHRONOLOGY

Plate 5 : *Strewn potsherds in a coastal sandy stretch — archaeological site at Vettilaikkēṇi, Paccilaippaḷḷi.*





Plate 6 : *Early Carinated Black and Red Ware sherds in situ, from the Megalithic burial site, Āṉaikkōṭṭai.*

If a famous sentence is allowed to be borrowed and modified, one can say "Chronology is the backbone of history, and that is more than a tragedy in the history of Jaffna". Even the chronology of the rulers of the kingdom of Jaffna is misty. One finds an urgent necessity and ample scope in the archaeology of Jaffna, to employ the absolute dating methods like C_{14} and Thermoluminiscence, as only such methods can shed light on the problems of chronology. Unfortunately, all these absolute dating methods are out of reach for a research student working in an infant University of a developing country.

Hence all that we could do was to go for a typological analysis of the artifacts. The best preserved and the most abundant artifact available in the sites of Jaffna is pottery. A careful analysis of the pottery types, and its overlapping provided the infrastructure of the sequence of those sites. This typological sequence of pottery when correlated with evidences like palaeography and numismatics, revealed a fairly reliable provisional chronology for the sites.

This chapter precedes the exploration cum excavation reports in anticipation of a better understanding of the reports.

Pottery Type 1

Early Carinated Black and Red Ware or Megalithic Black and Red Ware (ECBRW)

This type has a blunt rim and is usually in the form of bowls and dishes. The colour of the interior of the ware ranges from polished black to dull black. The exterior ranges from red to grey. Usually a narrow stretch along the exterior rim is also black in colour. This ware was supposed to be produced by an inverted firing technique in which the ware was inverted and fired underneath. The dual colour of the ware is attributed to this type of firing.[1]

In the South Asian context, the Black and Red Ware first appears in the Indus valley sites,[2] and later mainly seen in association with the Megalithic Culture of south India.[3] The Early Carinated Black and Red Ware which we have taken up for discussion is one of the types of the Black and Red Ware tradition that invariably appears in the Megalithic burials in south India.[4] In Sri Lanka besides Jaffna the other Megalithic sites also yield this type of pottery.[5]

During our survey this pottery was noticed only at five sites in Jaffna. At two places, Āṉaikkōṭṭai and Kaḷapūmi, this occurred in association with the Megalithic burials and was found *in situ* containing the burial offerings. They were available in plenty at Kantarōṭai. At two other places Maṇṇittalai and Vēlaṇai the number was negligible. Perhaps this was due to the fact that only surface explorations were conducted in these sites. This ware occurred in the earliest sites in the Peninsula and was the first to disappear. Hence this type was listed first in our classification.

The excavations at Āṉaikkōṭṭai and Kārainagar revealed that this ware existed in association with certain other Black and Red Wares (Type 2.1); Early Red Wares (Type 3); Rouletted Ware (Type 4) and rarely with the Thick Rim Red Ware (Type 5). It never was found in association with the other types.

At Āṉaikkōṭṭai the graffiti marks on the ware,[6] the palaeography of the metal seal found inside the ware[7] and the presence of the ware in a layer lower than the Rouletted ware,[8] ascribe its chronology to the last three pre-Christian centuries. However, Vimala Begley identifies a layer of this pottery at Kantarōṭai, the date of which she pushes back to C.4th century B.C.[9] Perhaps the present C_{14} date for Kantarōṭai (Appendix III) may push it further to 5th or 6th century B.C.

Pottery Type 2

Other Black and Red Wares

It was observed during the research that the technique of making Black and Red Ware survived long in the

Peninsula since various types of Black and Red Wares ranging from Megalithic times to the early centuries of the Christian era were noticed.

Therefore, we differentiated the other Black and Red Wares from the datable ECBRW and classified them into another group. Yet we feel that this classification is not to our entire satisfaction as it includes certain early types as well as late medieval types. Sub type 2.1 was found both in the protohistoric and early historic sites. Sub type 2.2 was found in the sites belonging to the early centuries of the Christian era. Sub type 2.3 is of doubtful nature as we could not ascertain its affinity with the black and red traditions. This sub type is a grooved rim ware, found to be black and red even in the rim and was obtained in the late medieval sites.

Pottery Type 3

Early Red Wares

The Red Ware types which were found along with the ECBRW in the Āṉaikkōṭṭai and Kaḷapūmi excavations were differentiated from the other Red Wares and classified as Early Red Wares.

Pottery Type 4

Rouletted Ware

The presence of Rouletted Ware in Tamil Nadu was vividly recorded by Sir Mortimer Wheeler in his Arikamedu excavation report.[10] At Arikamedu the Rouletted Ware has been noticed along with the specifically datable Arretine Ware and with Roman coins. Hence, a date between 1st century B.C. and 1st century A.D. has been suggested to the Rouletted Ware in the context of Arikamedu. The ware was also found associated with Black and Red Ware at Arikamedu. There are opinions that the advent of Rouletted Ware in South Asia may slightly go anterior to the above mentioned date.

The standard Rouletted Ware in Tamil Nadu and Sri Lanka is of fine fabric, dual in colour (inside polished black to dull black and outside polished saffron to dull saffron) and available in the form of bowls. The ware got its name by rouletted marks found on it. The ware was suggested to have been made in the Mediterranean region and introduced here with the Roman trade but local imitations cannot be ruled out. In Jaffna, we noticed many variations of this type which has been listed elsewhere in this chapter.

The Rouletted Ware has been collected nearly from ten sites in the Jaffna peninsula. All the sites except Kantarōṭai are coastal sites. The ware was found in abundance at Kantarōṭai. In the context of Jaffna, the Rouletted Ware was found in association with the ECBRW, other Black and Red Wares, Early Red Wares and Thick Rim Red Ware. It never came in association with the other types. We had the opportunity of looking into the pottery bags of Kantarōṭai excavation, deposited in the Jaffna Archaeological Museum. An interesting sequence of occurence of the Rouletted Ware has been noticed in those samples. The pottery bags from the upper layers contained few Rouletted Ware sherds and the associated ware was mainly Thick Rim Red Ware. The pottery bags of middle layers had a large number of Rouletted sherds (almost about 40%) and the main associated wares were ECBRW and other Black and Red Wares. The pottery bags of lower layers did not produce Rouletted sherds but only had the ECBRW, other Black and Red Wares and Early Red Wares.

The presence of Rouletted Ware along with ECBRW in the context of Jaffna suggests its prevalence right from the dawn of Christian era. At Āṉaikkōṭṭai, a Rouletted Ware sherd was found stamped with two evolved Brāhmi letters of 2nd-3rd century A.D.[11] This points out the continuity of Rouletted Ware into early centuries of the Christian era. Hence the presence of Rouletted Ware extremely helps us to identify the early historic sites in Jaffna.

The amphorae ware which is an associated type of Rouletted Ware was rarely found in our survey that too confined to the Vaṭamarātci coastal sites and Kantarōṭai. We have not included the amphorae ware in this classification because of its scarce availability.

Pottery Type 5

Thick Rim Red Ware (TRRW)

This is the most frequent type of pottery found in the early archaeological sites of the Peninsula. It first appears very rarely in the Megalithic burials in association with the Early Carinated Black and Red Ware but is seen in abundance later and survives till the beginnings of the kingdom of Jaffna. The time span of this ware lasted for at least 1500 years.

The ware is noticed in many forms and in various fabric, but uniformly the rim is convex and thick. In

form, generally it can be grouped into three : 1. storage jars 2. *kunṭu caṭṭi* or bowl/basin 3. rice cleaning bowls. Determining the chronology of a site on the basis of this type of pottery alone is rather difficult, as we found that this type survived for 1500 years. But when correlated with the associated types and with other artifacts, this ware could help enormously in determining the sequence.

However, this type is the main indicator for any pre-Kingdom site in the Peninsula. It came in association with the ECBRW and Rouletted Ware. It came in association with the other Black and Red Wares in the sites dated to the early centuries of the Christian era. The ware itself had a Black and Red sub-type which we included in type 2.2. In later centuries the ware was found along with the Chinese, and Islamic wares, Sri Lankan medieval coins and glass beads.

There are certain sites where this type of pottery alone was noticed,[12] and medieval coins (11th-13th centuries) were collected from such sites. Some of the pottery specimens from these sites had grooves in the thick rim. In its last phase we found that this type overlapped with the Grooved Rim Pottery. (type 8) and subsequently disappeared.

Pottery Type 6

Chinese and Islamic Wares

The dates of these glazed and unglazed stone wares and the other wares usually range between 9th and 13th centuries[13] A.D. The presence of this type at certain sites helps us immensely to determine the dates of the associated pottery and on many occasions, the upper dates of certain sites in the Peninsula.

A detailed study of Chinese and Islamic Wares by Prof. John Carswell, the director of Māntai Archaeological Expedition, is under progress. The Māntai site in the Maṉṉār district of Sri Lanka is extremely rich in varieties of Chinese and Islamic wares. We expect that Prof. Carswell and his colleagues will shed light on the classification and chronology of Chinese and Islamic wares. The staratified evidences being unearthed at Mantai will also help to assign dates for the associated local pottery.

Pottery Type 7

Grooved Thick Rim Ware

Tentatively, we have classified this as a separate type, for we feel this could be an intermediate phase in the transition of Thick Rim Red Ware into Grooved Rim Ware. This type was usually obtained along with medieval coins (11th - 13th centuries) and its presence was especially noticed at the Vaṭamarāṭci and Paccilaippaḷḷi sites.

There is also a possibility that this type was produced by the traditional Thick Rim Red Ware potters when they were influenced by the newly introduced Grooved Rim Ware.

Pottery Type 8

Grooved Rim Ware (GRW)

This is the second most frequent ware next to the Thick Rim Red Ware found in the archaeological sites of the Peninsula. The ware first overlaps with the TRRW and later succeeds it and continues. The Grooved Rim Ware survives even today.

The associated finds of this ware are usually the medieval coins of Sri Lanka (11th - 13th centuries), the coins of the Kingdom of Jaffna and those of the Dutch and the early British.

Though this type of pottery falls outside the scope of this study, it helps us to determine the upper limits of our survey.

At Irupalai, an abandoned potters' mound stratigraphically provided the layers of this type of pottery and at the lower layers the mound revealed a varient of TRRW which significantly helps us to determine the overlapping, and the upper limits of the TRRW.[14]

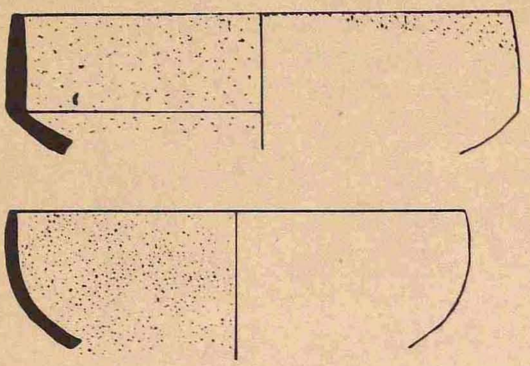
Pottery Classification

We have synthesised here a five-fold classification code, for the pottery obtained during our survey. They are classified on the basis of type, sub-type, form, fabric, and decoration.

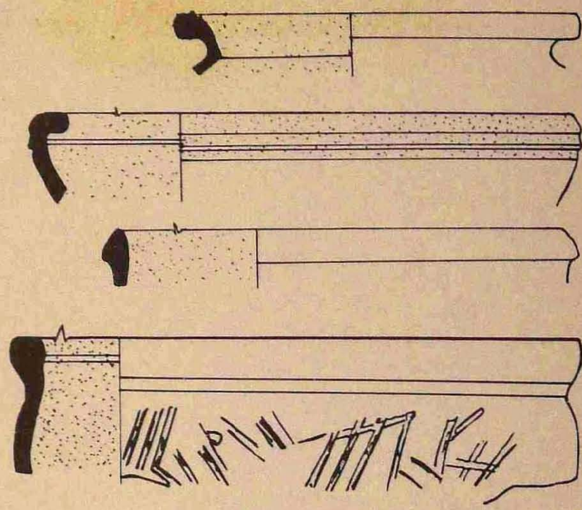
Each of the major types described here is further divided into sub-types. The sub-types are usually divided on the basis of the form of the rim. For types 4 and 6, the sub-types are identified on other grounds.

The types and the sub-types are indicated by the decimal number. About 9 forms are indicated by Roman numbers. The fabric and the decorative features are indicated by abbreviations, while missing or uncertain data are indicated by a question mark.

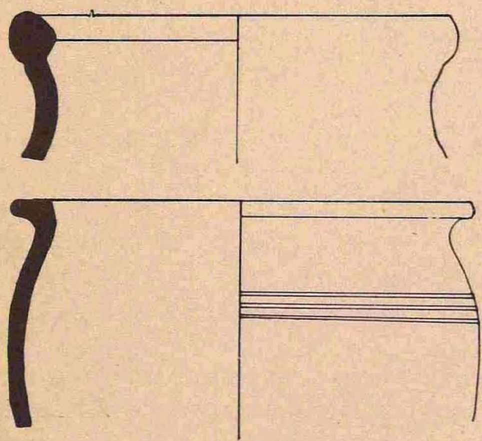
Plate 7 : *Main types of pottery (reductions not to uniform scale).*



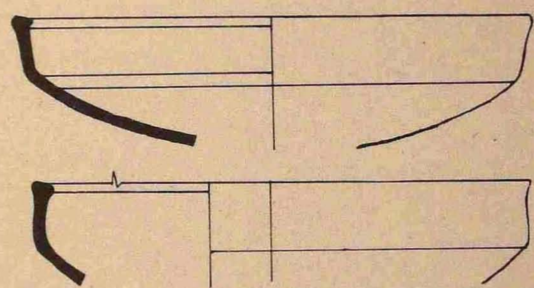
Type 1



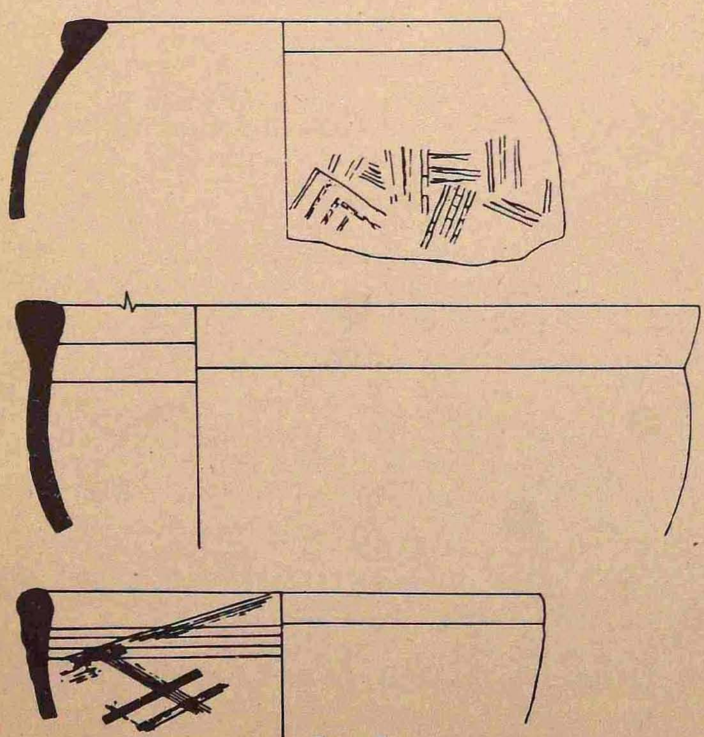
Type 2



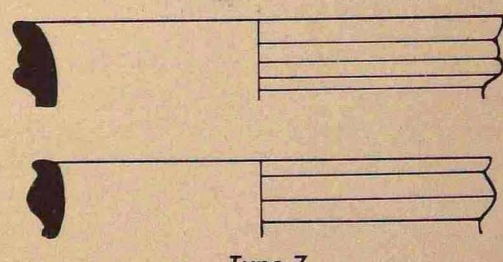
Type 3



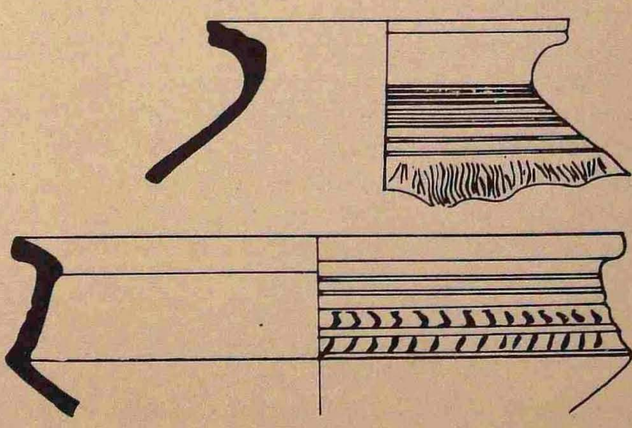
Type 4



Type 5



Type 7



Type 8

Pottery Types and Sub-Types

Type 1 : ECBRW

1.1 Blunt top rim.
1.2 Flat top rim.

Type 2 : Other Black and Red Wares

2.1 Early Red Ware (Type 3) Black and Red Wares
2.2 Thick Rim Red Ware (Type 5) Black and Red Wares.
2.3 Grooved Rim Ware (Type 8) Black and Red Wares

Type 3 : Early Red Wares

3.1 Rolled Rim Wares; include convex, full, and out-projecting Rolled Rim Wares.
3.2 Deep necked and moderately necked *Panai* wares.
3.3 *Kuntucatti* without neck
3.4 *Vattil* wares.

Type 4 : Rouletted Wares

4.1 Both sides black, rouletted mark on one side.
4.2 Both sides grey and rouletted mark on one side.
4.3 Saffron on one side and grey on the other. Rouletted mark on the grey side.
4.4 Saffron on one side and black on the other, rouletted mark on the saffron side.
4.5 Grey fine ware. The fabric is similar to that of the rouletted ware.
4.6 Interior grey, exterior saffron, fine ware.
4.7 Both sides saffron, section grey, fine ware, fabric similar to that of the Rouletted Ware.
4.8 Interior polished black, exterior saffron with grey patches. The top of the rim is flat.
4.9 Interior grey, exterior saffron with grey patches. The top of the rim is flat.

Type 5 : TRRW

5.1 Jar type rim.
5.2 *Kuntucatti* type rim.
5.3 Thick rim; other types.

Type 6 : Chinese and Islamic Wares

6.1 Stone ware — green glazed.
6.2 Stone ware — dark brown glazed
6.3 Stone ware — light brown glazed
6.4 Stone ware — interior yellow glazed, exterior dotted brownish yellow glazed.
6.5 Stone ware — Islamic blue-green glazed.
6.6 Stone ware — glassy maroon glazed.
6.7 Stone ware — unglazed.
6.8 Porcelain — white
6.9 Porcelain — cream white
6.10 Porcelain — white or cream white colour, decorated.

Type 7 : Grooved Thick Rim Ware

7.1 Single groove on thick rim ware.
7.2 Two grooves on thick rim ware.
7.3 Three grooves on thick rim ware.
7.4 Four grooves on thick rim ware.

Type 8 : GRW

8.1 A single groove on the side of the rim / or on the top of the rim.
8.2 A single groove on the side and a single groove on the top of the rim.
8.3 Two grooves on the top of the rim.
8.4 Single groove on the side and two/three grooves on the top of the rim.
8.5 No grooves; yet belongs to this type.

Type 9 : Miscellaneous

9.1 Saddled rim lid (*Mūṭi*)
9.2 Oval shape ware.
9.3 Spouted ware.
9.4 Tāḻi/urn.

Form

Dish (*Vaṭṭil*)	I
Cup/Small bowl (*Kiṇṇam/Kōppai/Akal*)	II
Pot (*Pāṉai/Muṭṭi*)	III
Carinated bowl (*Caṭṭi*)	IV
Bowl/Basin (*Kuṇṭuccaṭṭi/Tācciccaṭṭi*)	V
Rice cleaning bowl (*Arikkaṉ caṭṭi*)	VI
Storage jar (*Aṭukkuppāṉai/cāṭi*)	VII
Lid (*Mūṭi*)	VIII
Urn (*Tāḻi*)	IX

Fabric

F	Fine grained
M	Medium grained
C	Coarse grained

Decoration

IS	Inscribed
IC	Incised
Pd	Paddled

Pn	....	Painted
Gl	....	Glazed
Pl	....	Polished
Sl	....	Slip
Br	....	Burnished
D	....	Other forms of decoration

Pottery and Chronology

We are well aware of the limitations of this relative dating system. At many sites even this relative determination was made on the basis of the surface finds and there are limitations in sampling. Stratified evidence was obtained only at three places. Yet we have designed the sequence of our research on the basis of pottery, because this was the only possibility with our limited facilities.

The other problem is the reliability of the sequence obtained through pottery. Certain types of pottery could have survived longer or been extant earlier in one region than in another region. But our method tends to give uniform sequence for the whole Jaffna region which is actually questionable. However, we believe that the error is minimal as this sequence has been developed through microlevel studies in a small region.

In the following section Chapter Three, the pottery descriptions are presented in code. For example, 2.1/III/M/IC means that the pottery is a Historic Black and Red Ware, similar to the Early Red Wares in its rim shape, Pot (*Panai*) in its form, medium grained and incised.

Archaeological Sites and the Pottery Types

Sites	1	4	3	2	5	6	7	8
Kantarōṭai	X	X	X	X	X	X		X
Āṉaikkōṭṭai	X	X	X	X	X			X
Cattirantai	X	X	X	X	X			
Vēlaṇai-cāṭṭi	X	X	X	X	X	X		X
Maṇṇittalai	X	X	X	X	X	X		X
Vallipuram		X	X	X	X	X		X
Nākarkōyil		X	X	X	X	X	X	X
Karumaṇalkumpi		X	X	X	X	X	X	X
Tāḻiyaṭi		X	X	X	X	X	X	X
Vettilaikkēṇi		X	X	X	X	X	X	X
Veṭiyaracaṉkōṭṭai		X	X	X	X	X		X
Vērappiṭṭi			X	X	X	X		X
Ticaimaḻuvai			X	X	X	X		X
Kaḷaiyōṭai			X	X	X	X		
Ariyālai East			X	X	X			
Muḷḷi			X	X	X	X		
Āṉaiviḻuntāṉ					X			
Tikaḻi					X			
Tulukkaṉkōṭṭai					X			
Maṇṭalāi					X	X	X	X
Nitiyaveṭṭai					X	X	X	X
Papparavappiṭṭi					X	X	X	X
Cankiliyātiṭal								X
Kaccāi								X
Irupālai								X
Paṅkuṉippiṭṭi								X

Numbers 1-8 indicate the Pottery types mentioned earlier. Type 4 precedes Types 2 and 3 as it mainly occurs along with Type 1 and disappears earlier than Types 2 and 3. Note the overlappings of the pottery types in a time span of one and a half milliennia.

EXPLORATIONS AND EXCAVATIONS

Plate 8 : *Vērappiṭṭi, Kāraiṇagar — an early port settlement, now a fishing hamlet.*





Plate 9 : *Megalithic burial SK 1, Āṉaikkōṭṭai.*

Veṭiyaracaṉ Kōṭṭai — Neṭuntīvu (Delft)

Latitude :

9° 32′ 12″ N

Longitude :

79° 39′ 05″ E

One inch sheet no :

Delft Sheet Z10, 15.A6, 11

Mosaic sheet no :

Z10, Z15

Approach :

Neṭuntīvu or Delft is the furthest island off the Jaffna peninsula. The site is located in Neṭuntīvu West, along the coast, within one km. north of the fishing port known as Periyaturai.



Plate 10 : *Veṭiyaracaṉkōṭṭai, Neṭuntīvu; circular base of a stupa, partially reconstructed by the Sri Lanka Department of Archaeology.*

Description :

The site consists of a few mounds of structural remains scattered in an area of 15-20 acres. The building material consisted of chiselled and unchiselled coral. At certain places one could notice the circular coral stone bases upon which the Sri Lanka Department of Archaeology had partially reconstructed three *stupas.*

Soil :

The coastal part of the site is rocky and coral outcrops are found everywhere. But the interior is of loose earth and can be categorised as alkali and saline soil or grey loam.

Fresh-water sources :

Wells are the source of fresh-water. A few abandoned wells were found in the site itself. The spot is known for the availability of fresh water as people of the neighbouring areas come here to collect drinking water.

Distance from the sea :

The coast adjoining the site is rocky and is not suitable for a harbour. But one particular spot nearby, south of the site, is free of rocks. it is significant that this area is known as Periyaturai, which means the 'Big' or 'Main' harbour.

Natural vegetation :

Palmyra and scrub.

Grazing-land :

Available in plenty. Pasturing, especially of goats, is still one of the main subsistence patterns in this island.

Present cultivation :

Part of the site is now being cleared for the cultivation of vegetables. The well irrigation is hand-lifted.

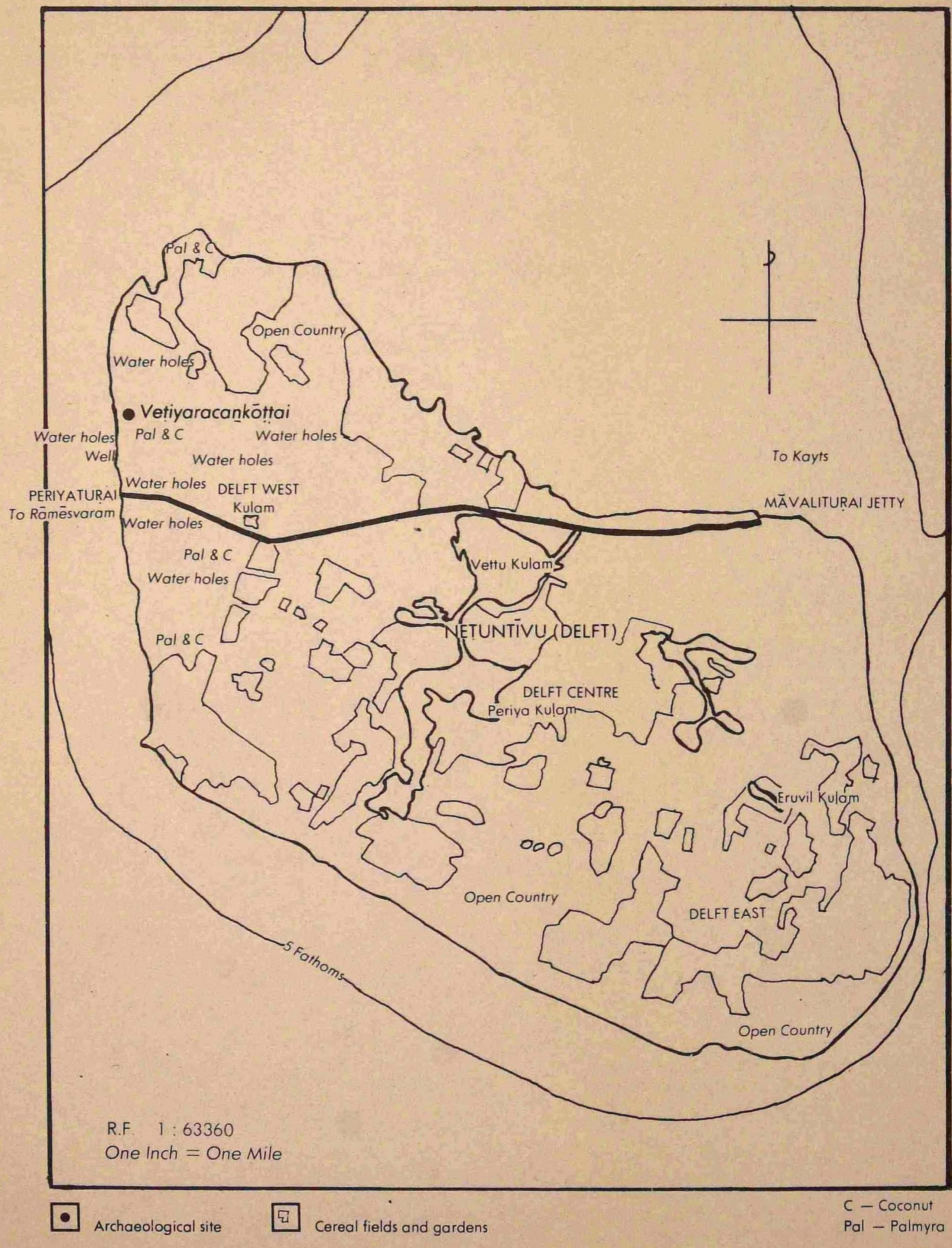


Plate 11 : *Veṭiyaracankōṭṭai, Neṭuntīvu — site map.*

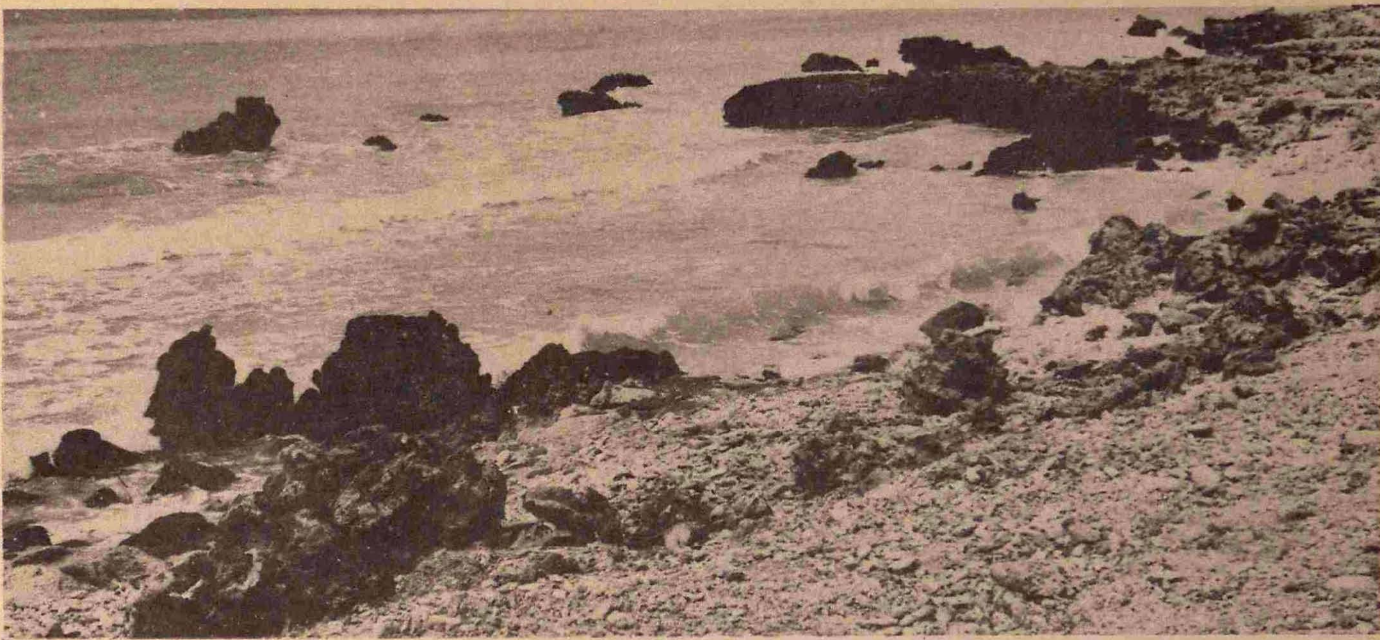


Plate 12 : *Coral formation in the coastal stretch, facing Veṭiyaracaṉkōṭṭai, Neṭuntīvu.*

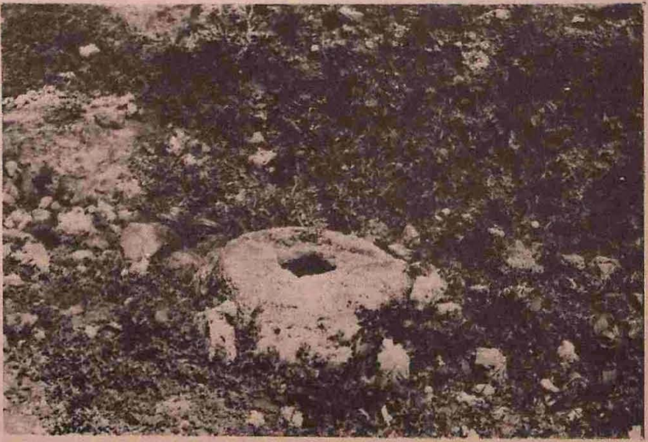
Plate 13 : *The main stupa-mound at Veṭiyaracaṉkōṭṭai, Neṭuntīvu. The structure seen on the top was reconstructed by the Sri Lanka Department of Archaeology without any excavation.*





Plate 14 : *The 'Pakir' fences at Neṭuntīvu. Constructing the compound-wall by arranging the coral stones is a local practice still prevailing especially in the island sector of the Peninsula. The term 'Pakir' as a verb means 'devide'.*

Plate 15 : *A socket-stone found at Veṭiyaracaṉkōṭṭai, Neṭuntivu. Such stones served as post-holes to erect temporary or permanent shelters/structures. Such post-holes were found either scooped into rock outcrops of the terrain or into large movable stones.*



Availability of building material :

Best quality coral stones are available in plenty everywhere in the Island. This island is known for its coral structures and fences called *Pakir*, the practice of erecting which is now extinct in the Peninsula.

Disposition :

As the furthest island from the Peninsula, it is half way between Jaffna and the Rāmanātapuram District of Tamilnadu.[1] Vessels coming trom this part of Tamilnadu should pass Delft to reach Kayts, a well-known port of ancient Jaffna. As the journey from Delft to Kayts is sometimes difficult because of the currents, a stop-over at Delft would have been necessary.

Local legends :

The site is known as Veṭiyaracaṉkōṭṭai which means the fortress of Veṭiyaracaṉ, a legendary figure in the Jaffna chronicles.

Remarks :

It was noticed during our survey that some of the residents collected fresh water snails for food from pools of rain water. It is interesting to note that the use of this particular edible snail as a food item dates back to Mesolithic times in Sri Lanka.[2]

The pottery analysis indicates that a settlement emerged here in the first few centuries of the Christian era, as we found on the site certain types of the Historic Black and Red pottery and Rouletted Ware assigned to that period. It must have continued maintaining its position up to the times of the Jaffna kingdom, as the latest pottery available at the site was Grooved Rim Ware. The site was possibly a place of Buddhist worship patronized by the ancient traders. It could have been abandoned after the Brahmanization which took place intensively in the time of the kingdom of Jaffna.

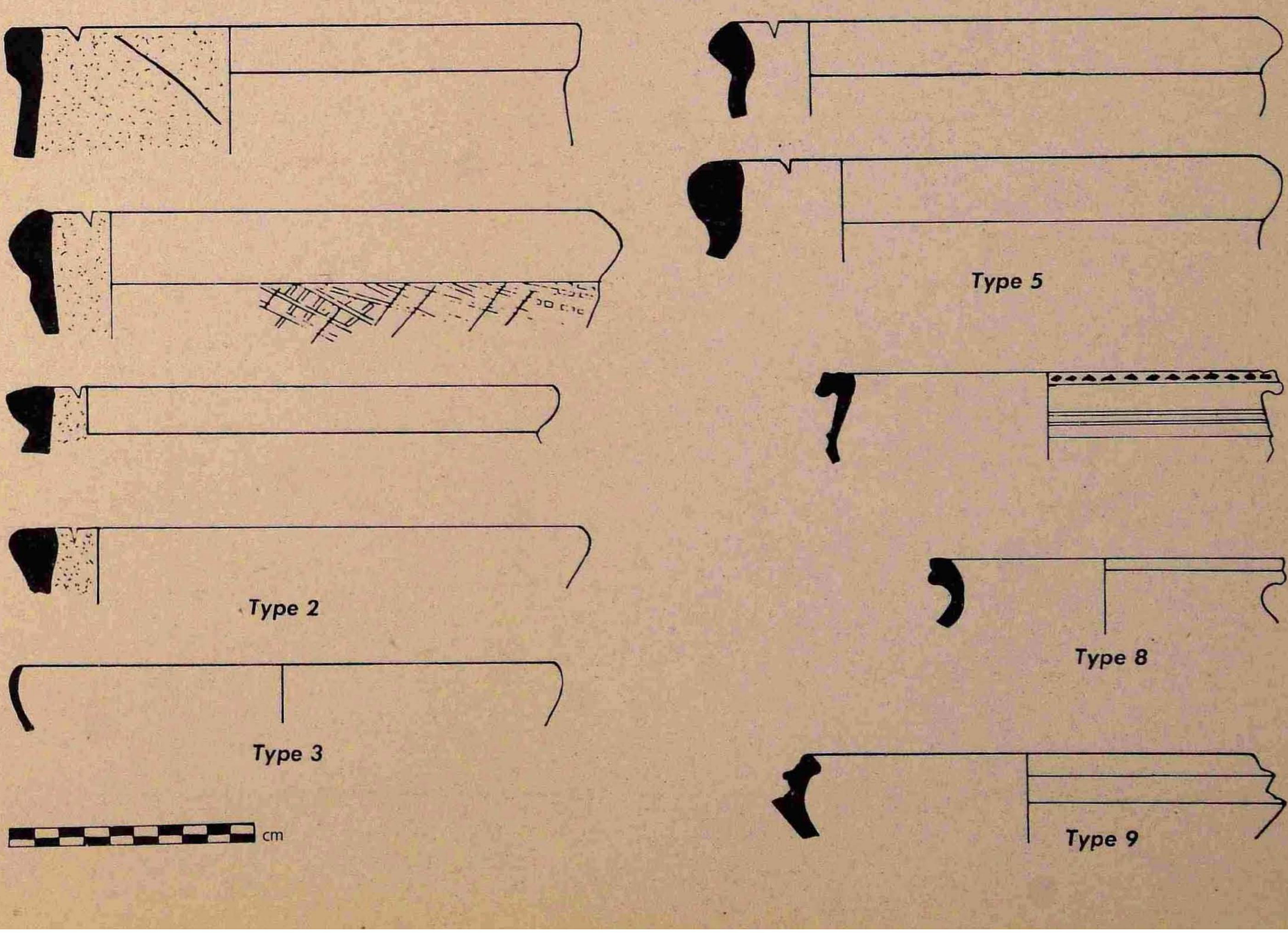
List of pottery types

2.1/V/M	4.6/? /F
2.2/V/C	4.7/? /F
2.2/V/M/Pd	5.2/V /M
2.2/V/M	6.7/? /?
3.2/?/M	8.1/IV /M
3.4/I/M	8.1/? /M
4.5/?/F	9.1/VIII/M

List of other finds

1. Fragments of copper
2. Iron tool (nail)
3. Iron slags
4. Pestle stone (alien material)
5. Grooved tiles
6. 20 paste beads and a few carnelian beads
7. 3 blue glass beads
8. Flaked, semi-precious stones (Carnelian)
9. A copper coin. Legend : S'rimat Sāhasamalla
10. Coins ? Unidentified

Plate 16 : *Pottery types — Veṭiyaracaṉkōṭṭai, Neṭuntīvu.*



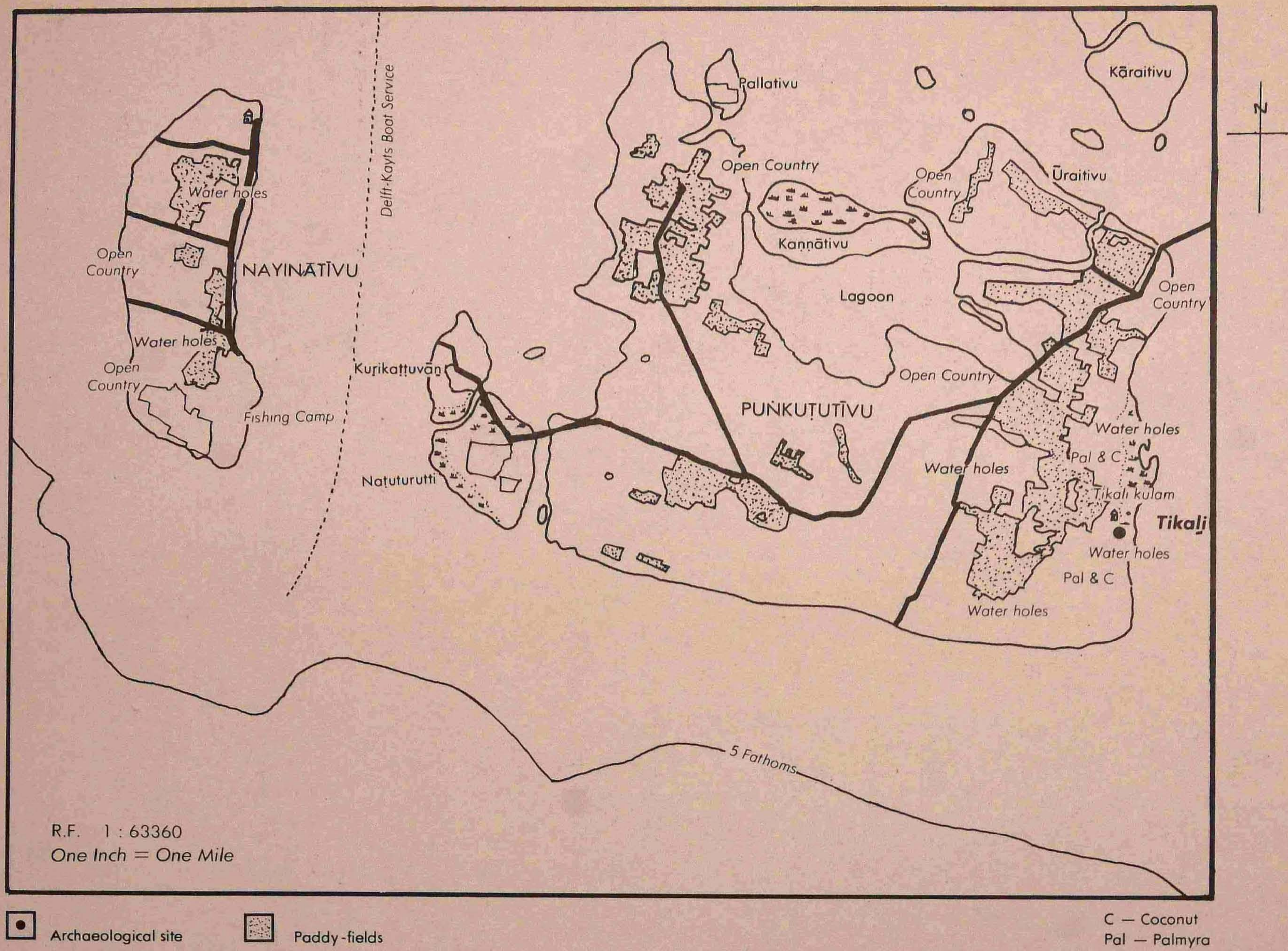


Plate 17 : *Tikaḻi, Puṅkuṭutīvu — site map.*

Tikaḻi — Puṅkuṭutīvu

Latitude :

9° 34′ 50″ N

Longitude :

79° 51′ 20″ E

One inch sheet no :

Delft Sheet Z10, 15.16, 11

Mosaic sheet no :

A6

Approach :

The site is on the eastern coast of Puṅkuṭutīvu island. It can be reached by moving towards the coast from the Tikaḻi Kulam.

Description :

The potsherds are sparsely distributed in an area of 5-10 acres. Nothing could be determined about the nature of the site by the surface features. The only clue was provided by the presence of a torso of a limestone image which belongs to Buddhist iconography. This torso was placed in front of a folk temple for the ritual breaking of coconuts.

Soil :

Sandy regosol in the site; alkali and saline soil in the hinterland where paddy fields are situated.

Water resources :

The largest tank of the Island (Periyakuḷam) and the Tikaḻi Kuḷam are nearby, but they go dry in summer. Fresh water is obtained from wells. The best drinking water of the Island is available at the Kaṇṇakai Ammaṉ temple nearby.

Distance from the sea :

The site is facing the sea, but the coast here is marshy and abounds with coral reefs.

Natural vegetation :

Palmyra and scrub (*Īñcu, Tāḻai* etc.) in the site and marsh land flora along the coast.

Grazing-land :

The paddy-fields of the hinterland could be used. Many parts of the Island are suitable for grazing as there are vast tracts of *taravai* grasslands.

Present cultivation :

There are some paddy-fields in the hinterland around the Periyakuḷam and the Tikaḻi Kuḷam. The fields are not very productive. Cultivation is possible only once in a year that too depending on the rainfall.

Availability of building material :

Coral stones are available.

Disposition :

The site is the nearest point in the Puṅkuṭutīvu island to reach the ancient port settlement of Cāṭṭi at Vēlaṇai. This coastline at Tikaḻi directly faces the Ponnāveḷi coast of the mainland of Sri Lanka.

Remarks :

There are some ruins at the Ponnāveḷi coast of the mainland, which faces this site of Puṅkuṭutīvu across the Paḷḷikuṭā bay. A torso of an image very much identical with the torso we found at Puṅkuṭutīvu was located in an Aiyaṉār temple here.

The name Tikaḻi is also noticed as a name for a place at Tuṇukkai in Vaṉṉi, which is also an archaeological site.

The name of this island is identified with Piyaṅkudīpa mentioned in Mahāvamsa as a reputed seat of the Buddhist monks.[3]

The pottery evidence dates the site between the early centuries of the Christian era and the times of the Jaffna kingdom.

The site could have been a place of worship and this coast is facing the ancient sea routes.

List of pottery types

3.2/III/C
5.2/V/C
5.2/V/M
9.6/III/C

List of other finds

1. Fragments of iron
2. A limestone torso of Buddhist iconography.

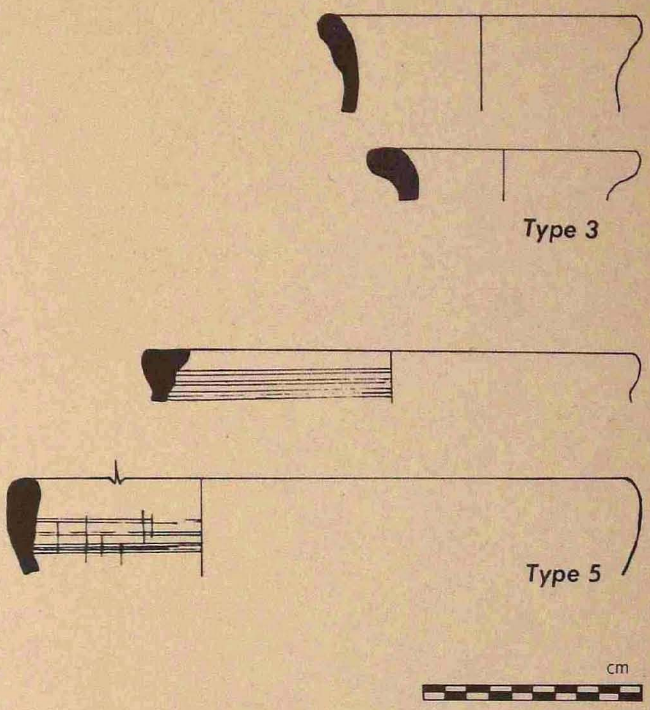


Plate 18 : *Pottery types — Tikaḻi, Puṅkuṭutīvu.*



Plate 19 : *A surviving Dutch-style mansion at the once flourishing port town of Kayts.*

Kumpuruppiṭṭi, Cōḻavattai, Nittil, Āvarantulā : Vēlaṇai Island Sites

Latitude :

9° 38′ 50″ N

Longitude :

79° 53′ 55″ E

One inch sheet no :

Jaffna Sheet A 21, 22, A1, 2

Mosaic sheet no :

A1

Approach :

These sites are situated amidst the paddy fields northeast of Vēlaṇai Junction.

Description :

The major site of this complex — the Kumpuruppiṭṭi site, consists of structural remains and the artifacts are scattered here in an area of 10-15 acres.

The mound here, with limestone slabs and chiselled coral stones, resembles a ruined *stūpa*. Grooved tiles were noticed in concentrations on one side of this mound, which has now become a pond because of heavy earth-scooping. The concentration and variety of the artifacts in the vicinity denote the importance of the site.

The other sites, Nittil, Cōḻavattai and Āvarantulā are neighbouring places where the pottery distribution is sparse. Āvarantulā yielded a carved circular stone slab that looks like a quern for making sandal wood paste.

It should be noted that the area from Cāṭṭi (the early port of the Island[4]) to Kumpuruppiṭṭi was found scattered with potsherds.

Soil :

Alkali and saline soil, suitable for paddy cultivation.

Fresh-water resources :

This area is full of small tanks, ponds and other water sources. Fresh-water is available throughout the year. It even supplies fresh-water for the neighbouring areas like Puṅkuṭutīvu island, during times of drought. Among all the Islands of Jaffna, this is the one rich in fresh-water resources.

Coastal prospects :

The ancient port Cāṭṭi is around 3 km southeast from these settlements. From Cāṭṭi access to the ancient sea trade routes is possible. On the other hand, in the eastern direction these settlements could have communicated with the Peninsula by ferrying across the Lagoon towards Arāli, which was in use till recently. This would have brought them closer to the Vaḻukkiyāṟu settlements and Kantarōṭai. In the northwestern direction, the Kayts port is within 10 km. Until recent decades, Kayts was well known for sea trade, conch-shell fishing and export.

Natural vegetation :

Palmyra is in abundance. Other kinds of natural vegetation are not found, because of the conversion of the area into paddy-fields.

Grazing-land :

The paddy-fields become grazing-lands after the harvest.

Present cultivation :

The surrounding area of the site is one of the extensive paddy-field stretches of the peninsula, probably only next to the Vaḻukkiyāṟu belt.

Availability of building material :

Coral stones can be obtained from the Lagoon coast and from Karampaṉ-Curuvil areas of the Island. Clay is available from the paddy fields.

Disposition :

In the Vēlaṇai island, the location of the sites possesses all the necessary conditions that have enabled it to emerge as the most important early settlement among the islands off Jaffna. It has an extensive agricultural and pasture hinterland; perennial fresh-water resources; lagoon and deep-sea fishing potentialities; and access to the outside world by its disposition in the sea trade routes. The northern tip of the Island, Kayts or Ūrkāvat-tuṟai, is in a controlling position of entrance both to the Jaffna lagoon and other Islands. This port finds mention as a strategic position in the medieval inscriptions[5] and in the literary records.[6] The Portuguese had a fort here,[7] and the Dutch had constructed another at the entrance to the Lagoon, off Kayts (Fort Hammenhiel). Until recently Kayts was an active harbour trading with the South Indian Ports. Even now Kayts is the administrative centre for the Islands adjoining the Peninsula.

The southern port of the Vēlaṇai Island, Cāṭṭi-Allaipiṭṭi, seems to have had contacts with the outside world right from the Roman times to the late medieval times.[8]

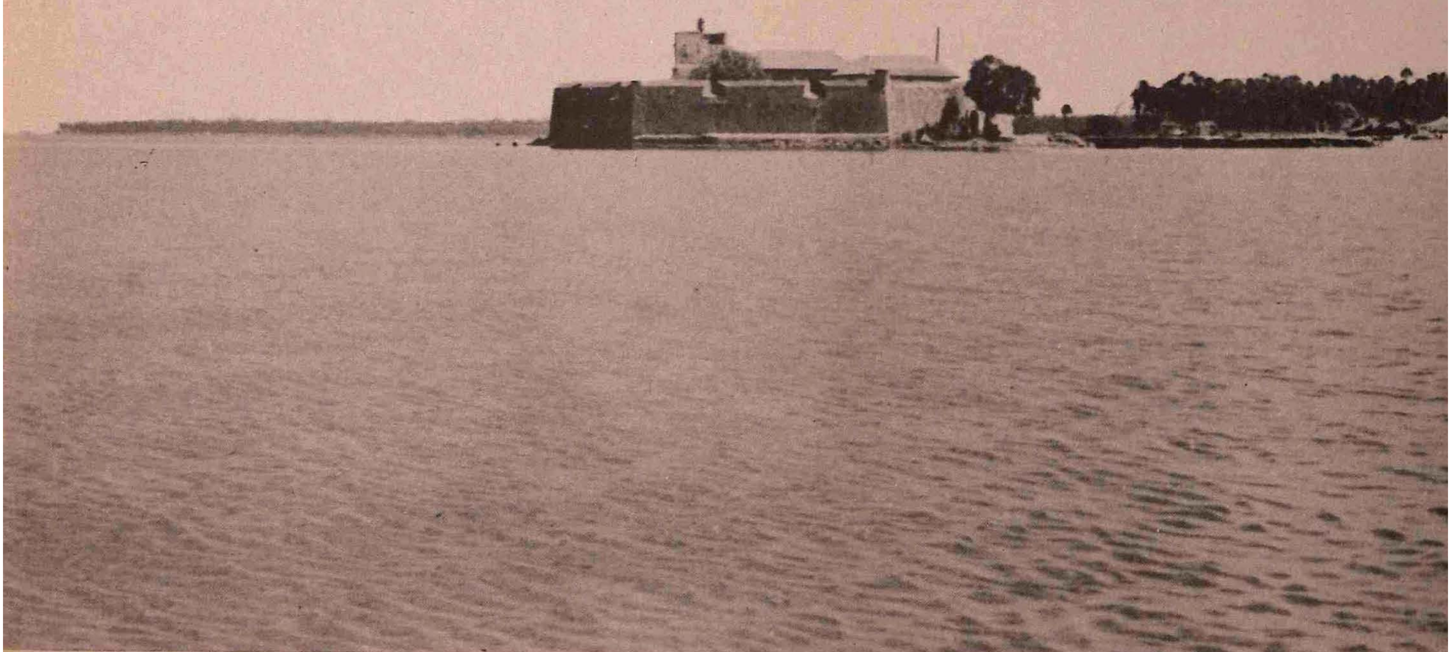
Thus the whole Island seems to have acted as a regional centre for the islands sector of Jaffna, and as an intermediate trade zone off the Peninsula.

Remarks :

The pottery analysis places this site on par with the earliest settlements discussed in this work. This site, considered together with Cāṭṭi, is one of the five settlements that yielded the Early Carinated Black and Red Ware in Jaffna. But, the distribution of this type is sparce here, only two sherds being found in the survey.

Tentatively we place the beginnings of these settlements around the dawn of the Christian era, if not earlier. They survived to the beginnings of the Kingdom of Jaffna.

Plate 20 : *Fort Hammenhiel, locally known as Kaṭaṟkōṭṭai, at the entrance to the Jaffna lagoon, off Kayts.*



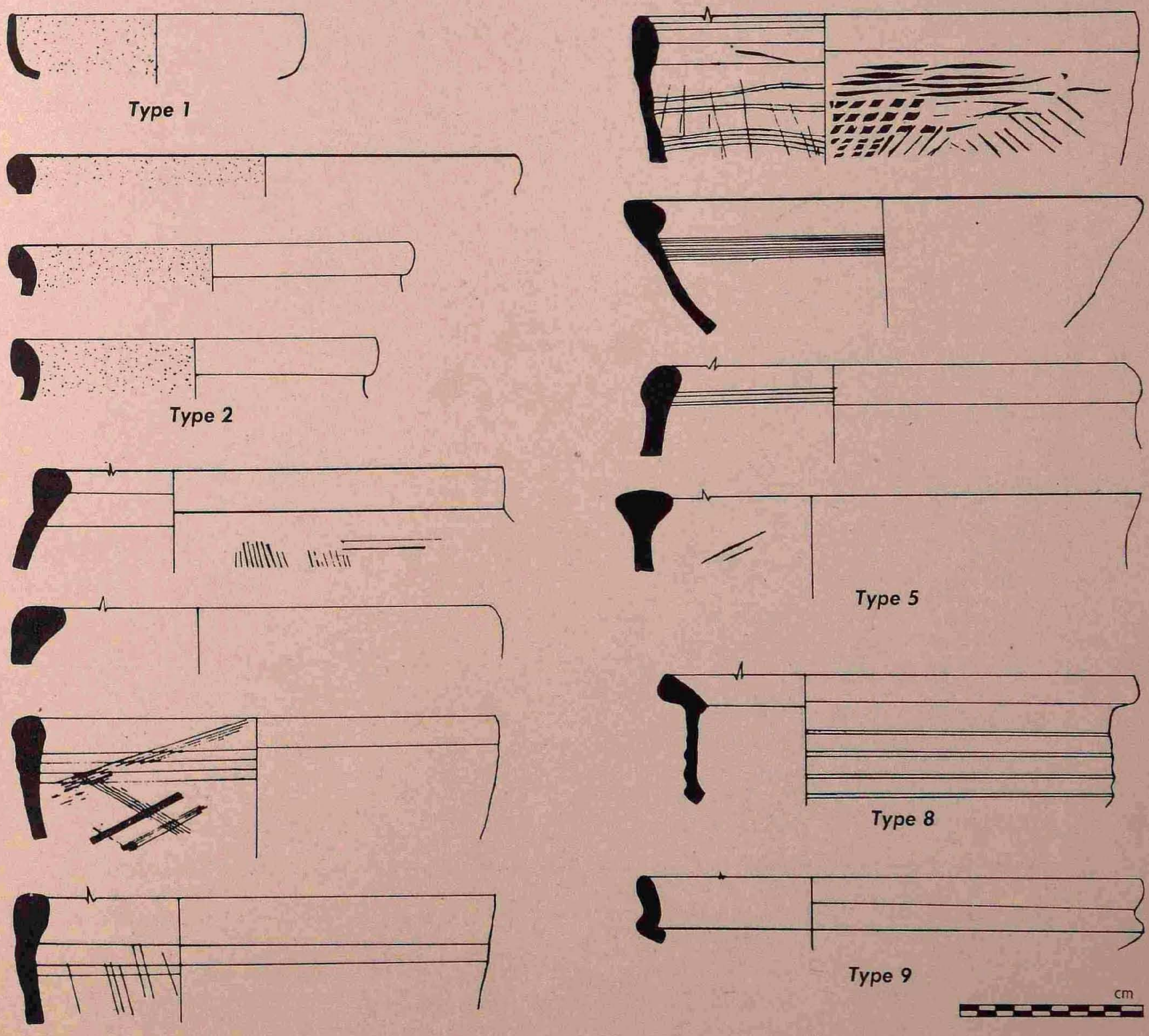
List of pottery types

1.1/I /M
2.2/V /M
3.3/III /M
3.5/III /M
4.5/? /F
5.1/VII /M/Pd
5.2/V /M/Pd
5.3/V /M
6.4/?
8.8/IV /M/D
9.1/VIII/M

List of other finds

1. Iron nails
2. Iron slags
3. Polished limestone slab : noticed at the site
4. Chiselled coral stones; a number of them were noticed.
5. Grooved tiles (16 × 12 × 1.5 cms)
6. A terracotta pinnacle
7. Pieces of old glass (variety in colour)
8. Glass core with flaked marks
9. Carnelian and paste beads
10. Glass beads
    Dark blue, light blue, and red in colour. Some of these resembled shell beads in shape.

Plate 21 : *Pottery types — Kumpuruppiṭṭi, Vēlaṇai.*



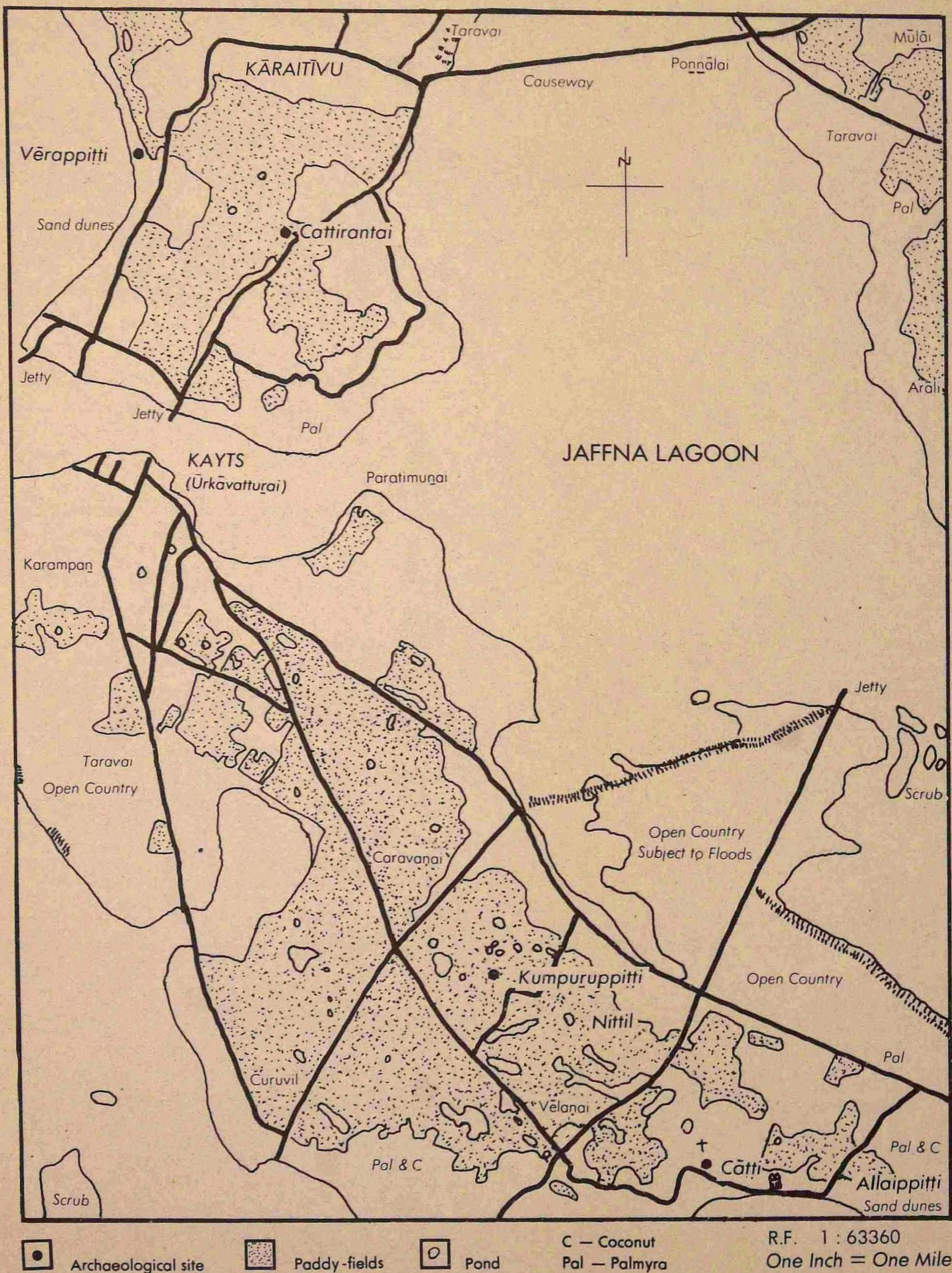


Plate 22 : *Vēlaṇai island — site map.*

Cāṭṭi, Allaippiṭṭi : Vēlaṇai Island Sites

Latitude :

9° 38′ 20″ N — Cāṭṭi

Longitude :

79° 55′ 00″ E — Cāṭṭi

One inch sheet no :

Jaffna	A^{A} 21, 22, A1, 2
Pooneryn	A7, O8, 12, 13
Delft	Z10 15.A6, 11

Mosaic sheet no :

A7

Approach :

The Cāṭṭi site faces a small bay and is located between the mosque and the church at Cāṭṭi.

The Allaippiṭṭi beach, also known as Maṇkumpāṉ, is a sandy stretch adjoining Cāṭṭi.

Description :

The occupational levels of the site at Cāṭṭi are now overlaid by wind-blown sand deposits and covered by natural vegetation like palmyra and scrub. This site was exposed, as in the case of many other sites in the Peninsula, by earth-scoopers.

At present, the exposed area of the site would be around 5-10 acres and the actual area could well be larger if the entire sand deposits are analysed. This site reveals structural remains like tiles, chiselled stones etc.

The Allaippiṭṭi — Maṇkumpāṉ sandy stretch has to be treated as a part of the Cāṭṭi port complex. This stretch is nearly 6 km long, from a place called Kappalōṭai to Cāṭṭi. Scattered potsherds are available in this stretch. Often pottery layers are exposed here by the activity of sand-scoopers.

A rescue excavation was conducted here some years ago by Prof. John Carswell resulting in the discovery of a cargo of Chinese ware in abundance. They are now at the Jaffna Museum. Prof. Carswell dates them to 12th century A.D.[9]

Soil :

The soil is sandy regosol and dune sand. The dunes have a whitish tint on account of which this beach is known as Veḷḷai Kaṭaṟkarai (white beach). At Cāṭṭi, though the surface is sandy, the implementiferous layer is alkali and saline (grey loam).

Fresh-water resources :

Excellent, perennial, groundwater is available in this area. When it rains, the whole Allaippiṭṭi area is flooded, which later yields as ground water. Presently the Cāṭṭi area supplies drinking water to the neighbouring island of Puṅkuṭutivu.

Coastal prospects :

The bay facing the Cāṭṭi site has all the features of an entrepot off the Peninsula. Today Cāṭṭi and Allaippiṭṭi strips are dotted with small fishing centres and this beach is frequently visited by picnickers who are attracted by its reefless shores of white sand.

Natural vegetation :

Palmyra and scrub in Cāṭṭi; palmyra and *Tāḻai* in Allaippiṭṭi. Allaippiṭṭi derives its name from an

edible yam known as *Allai* which is a natural vegetation in the coastal dunes. *Piṭṭi* means dune.

Grazing-land :

Not very suitable for grazing.

Present cultivation :

None in the vicinity of the sites. But extensive paddy-lands are available in the interior of the Island. Gardening is done at Allaippiṭṭi with well irrigation.

Availability of building material :

Coral is found in the north-western coast of the Island.

Disposition :

The Cāṭṭi site is in a convenient spot, enabling coastal navigational communication along the western coast of Sri Lanka as well as contact with the Tamilnadu ports. It also had at Vēlaṇai a prosperous hinterland to serve. These prospects are indicated by the artifactual distribution which continues from Cāṭṭi site towards the interior of the Vēlaṇai Island.

Remarks :

In our view, the Vēlaṇai island is the most important early settlement among the Islands adjoining the Peninsula. This Island, compared to the others, possesses the best environmental conditions. This has been discussed earlier.

Further, this island would have been the first land mass off Jaffna encountered by the vessels coming along the sea routes either from the south of Sri Lanka or from the Coromandal coast of Tamilnadu. Thus Cāṭṭi and Allaippiṭṭi together would have acted as an off-shore entrepot for the Jaffna peninsula and freight would have been carried locally by small boats plying the Jaffna lagoon. To our knowledge, Cāṭṭi seems to be the earliest port in the Island of Vēlaṇai and, one of the earliest in Jaffna.

On the basis of the pottery, a date around the dawn of the Christian era could be ascribed for the emergence of this entrepot as ECBRW (rarely) and sherds of Rouletted Ware were found. The port possibly lasted for several centuries and survived till the Dutch times, as indicated by the late types of pottery here.

List of pottery types :

1.1/? /M
2.2/? /M
3.4/I /M
4.5/V /F/D
4.5/V /F
4.9/I /F
5.2/V /M
5.1/VII /M/D
8.1/III /M/D
9.1/VIII/M

List of other finds :

1. An iron bar
2. Iron slags (fairly big ones)
3. Two rubbing stones — granite
4. Shark vertebrae
5. Grooved tiles (18 cm × 13 cm × 1.5 cm)
6. Terracotta pipes (12 cm diameter)
7. A terracotta disc
8. Blue glass beads

Plate 23 : *Finds from Cāṭṭi.*

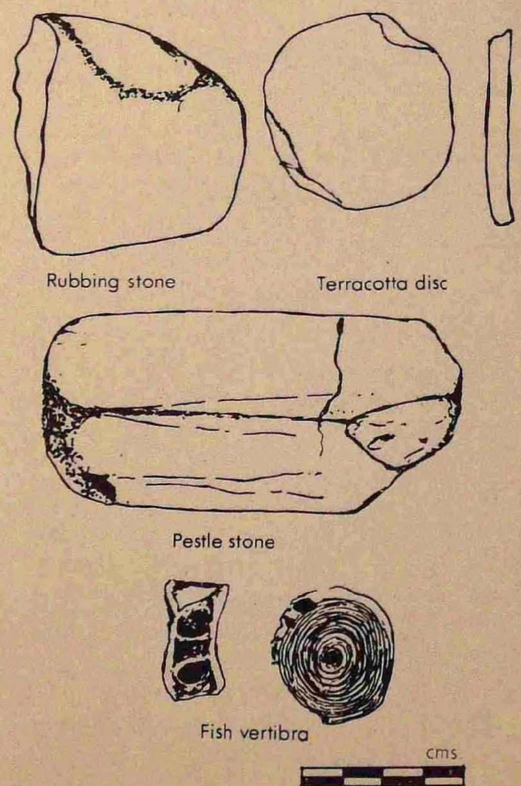
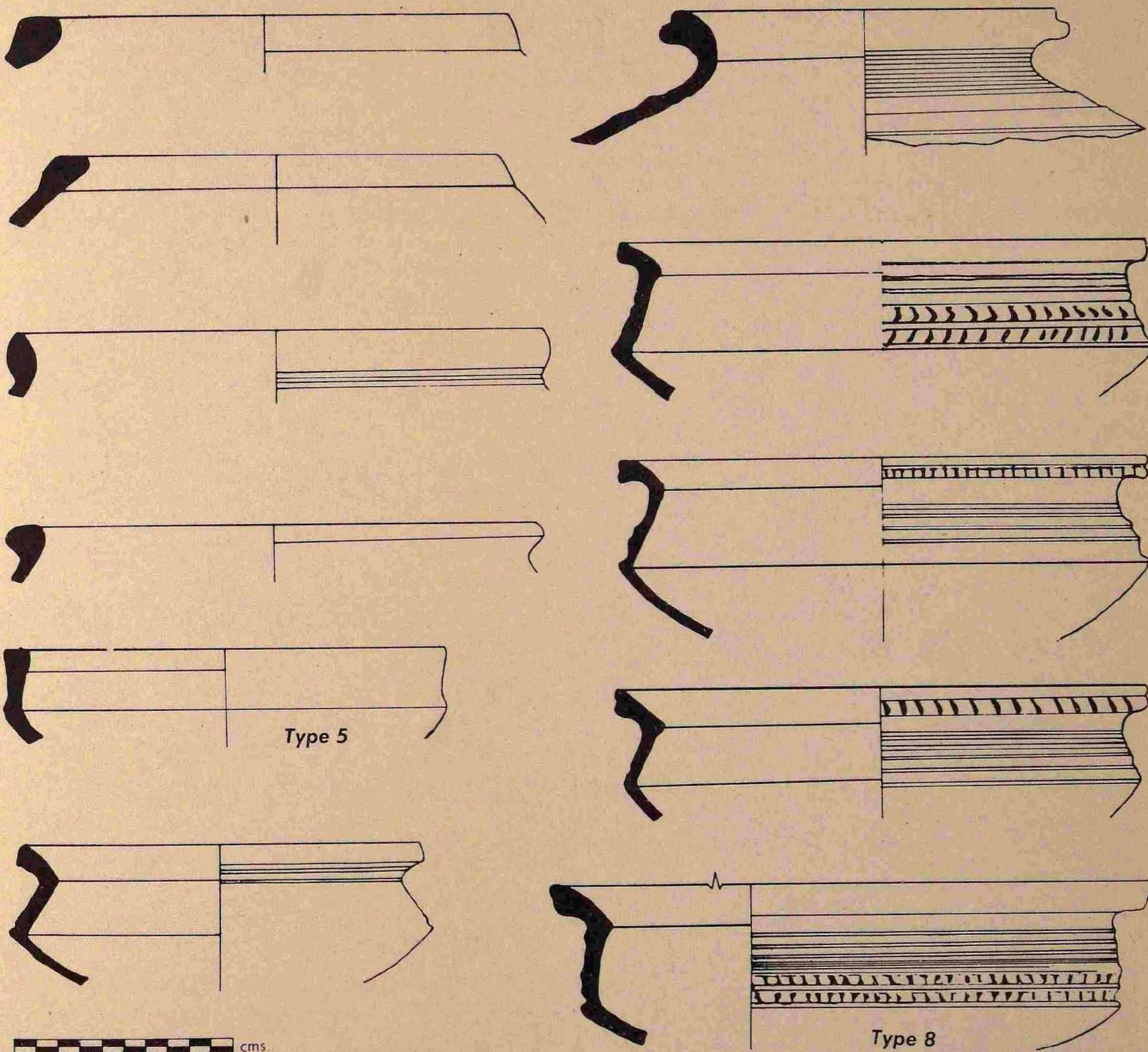


Plate 24 : *Pottery types — Cāṭṭi. Type 1-4 were found at the site but, the drawings are not given here.*



Pūmpukār, Maṇiyam Tōṭṭam — Ariyālai East

Latitude :

9° 37′ 50″ N — Pūmpukār
9° 38′ 05″ N — Maṇiyamtōṭṭam

Longitude :

80° 04′ 45″ E — Pūmpukār
80° 04′ 45″ E — Maṇiyamtōṭṭam

One inch sheet no :

Jaffna A[A]21, 22, A1, 02 (Maṇiyamtōṭṭam)
Pooneryn A7, 08, 12, 13 (Pūmpukār)

Mosaic sheet no :

A2, A7



Plate 25 : *A dune-sand mound exposing pottery and grooved tiles in its scooped section near the Aiyaṉār temple at Ariyālai East.*

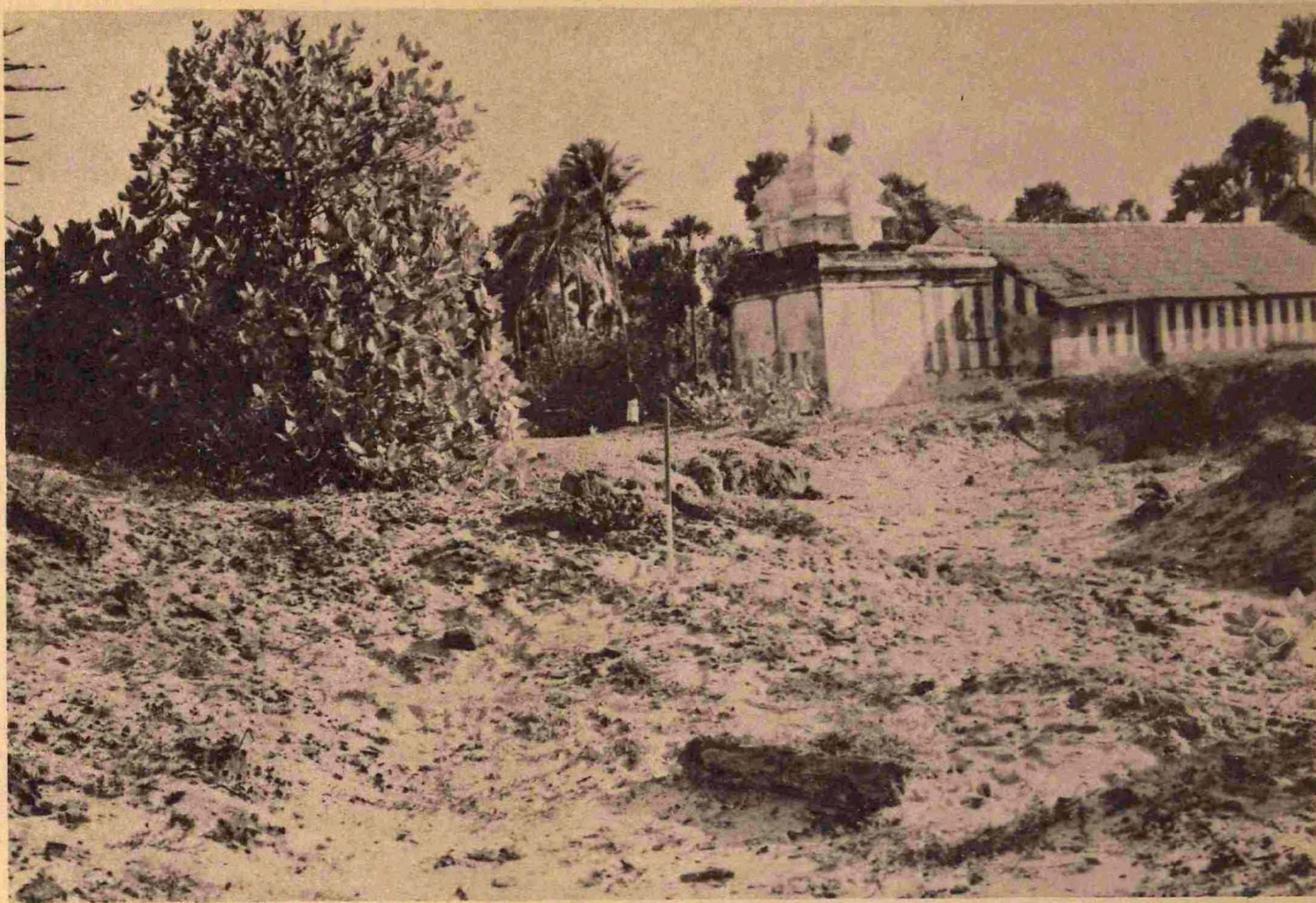


Plate 26 : *The Aiyanār temple at the Pūmpukār colony, Ariyālai East. The present temple is situated on an archaeological site that abounds with potsherds and other artifacts.*

Approach :

Both the sites are in the Ariyālai East area and the road leading to them deviates from the Kandy Road near the Municipal limits of Jaffna.

Maṇiyamtōṭṭam is a coconut estate, south of the road, and Pūmpukār is a new colony, also known as S.S.R. Colony, near an Aiyanār temple.

Description :

Ariyālai East is a sandy stretch that projects into the Jaffna lagoon from Koḷumputturai like a tail of Jaffna city. Both the sites are located in the southern coast of this stretch, facing the Jaffna lagoon.

In keeping with the general mode of archaeological discovery in the Peninsula, both the sites were brougth to light by the activity of the sand-scoopers who were very busy in this area to cater to the needs of the mushrooming house construction in the city suburbs.

During the survey, specimens of pottery, medieval and Dutch coins were collected at Maṇiyamtōṭṭam. But the distribution of pottery was not intensive here. It was reported by the locals that such items sporadically came up in this strip.

The Pūmpukār site is located adjoining the Aiyanār temple of Ariyālai East. In fact, the Aiyanār temple itself stands on the site.

Intense pottery distribution was noticed in this site, besides structural remains like grooved tiles, socket stones of pillars, and stone slabs. The socket stones were found in a particular arrangement. The stone slabs must have come from outside as this material does not belong to Jaffna. The artifacts were found distributed in an area of approximately 10 acres.

Soil :

Sandy regosol and dune-sand. The sand of the implementiferous layer is slightly grey in colour.

Fresh-water resources :

Perennial, saline free, groundwater is available.

Coastal prospects :

Subsistence fishing is carried out in the Jaffna lagoon which lies on both sides of the strip.

Natural vegetation :

Palmyra and scrub. The scrub is mainly *Cāya* root which grows as a thick surface cover, and *Tālai*. The stretch further east of Pūmpukār is almost a scrub jungle where small game like rabbits are found.

Grazing-land :

Not very ideal for grazing.

Present cultivation :

Coconut

Availability of building material :

None in the surroundings.

Disposition :

The whole strip of Ariyālai is strategically a vital one for the communication system of the Peninsula. This strip is separated from the Maṇṇittalai stretch of the mainland of Sri Lanka by the narrow Jaffna lagoon. On the northern side, it is separated from the rest of the Peninsula by the Uppāṟu lagoon which merges with the Jaffna lagoon at Cemmaṇi. Thus, this tail like formation acts as a link and provides the nearest accessible point to the main island of Sri Lanka. By crossing the Jaffna lagoon one can reach Maṇṇittalai, another sandy stretch that projects from Pūnakary.

Remarks :

Reference about a ferry service from the nearby Kolumputturai to the south is mentioned in the Portuguese records,[10] which impress us about the importance of this location in early communication.

The pottery available at the Pūmpukār site could be dated to the early centuries of the Christian

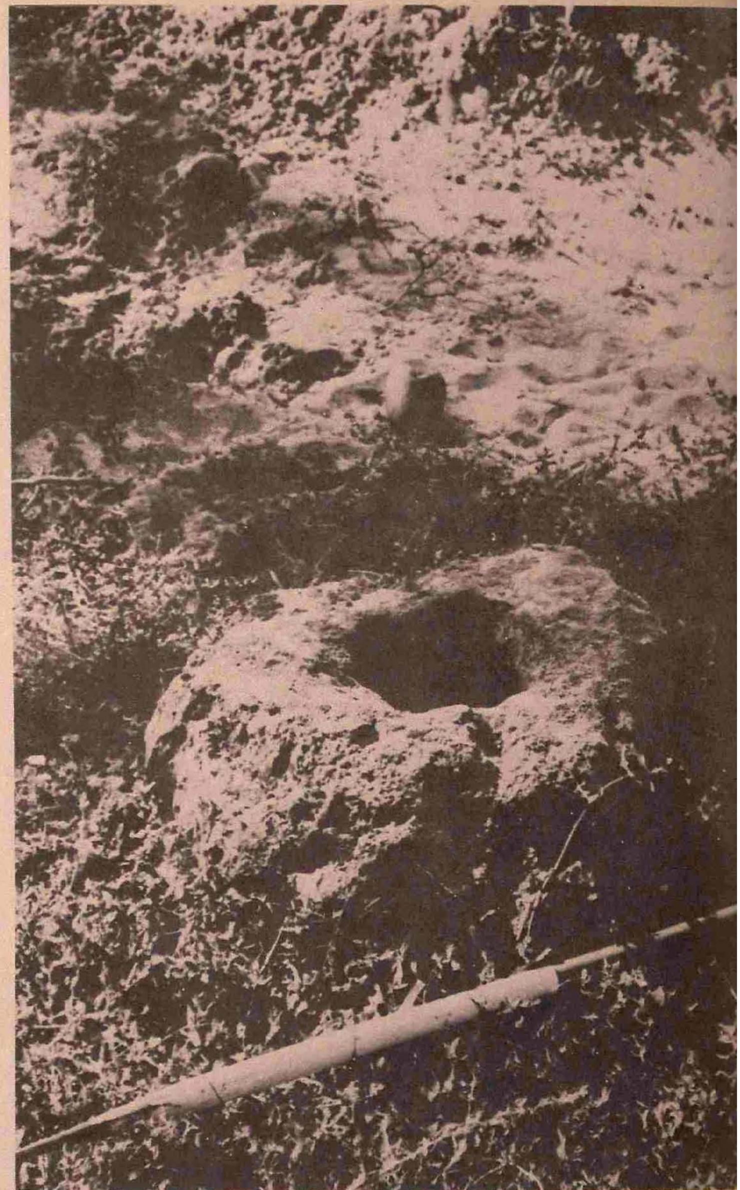


Plate 27 : *A socket-stone or post-hole stone found near the Aiyaṉār temple, Ariyālai East. Several such stones in a particular arrangement were found in this site (also see Plate 15).*

Plate 28 : *The archaeological sites at Ariyalai East and Maṇṇittalai sand-bar are separated by a narrow stretch of the Jaffna lagoon. This photograph has been taken from Ariyālai East. Seen at a distance is the Maṇṇittalai sand-bar which is a projection from the mainland Sri Lanka and disposited as a close point of communication with the Peninsula.*



era. The Maṇiyamtōṭṭam pottery is later, belonging to the medieval times.

These settlements have no agricultural or pastoral hinterland. Their importance must have been due to their geographical proximity to the mainland, and their potentiality in establishing a link with the main island. The influence of these sites in the communication system of the Peninsula must have survived till recently, as many ruined houses were found all along the lagoon coast. Probably it was the opening up of the Kērativu-Caṅkupiṭṭi communication and the Elephant pass link, that left Ariyālai East as a ghost ferry station.

The discovery of a few more sites in the area, with still older dates, could be anticipated.

List of pottery types :

2.1/V /M
3.4/III /M
5.2/V /M/Pd
5.2/V /M/D
5.1/VII /M/Pd
5.3/V /M/Pd

8.8/III /M/D
8.8/VII /M/D
8.1/III /M
8.7/? /M

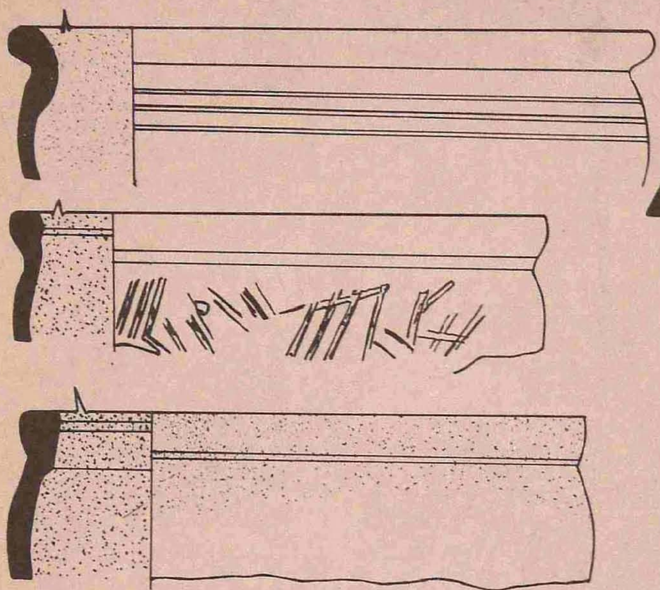
Obtained three specimens of pottery, resembling pedastals or pipelines (See plate).

List of other finds :

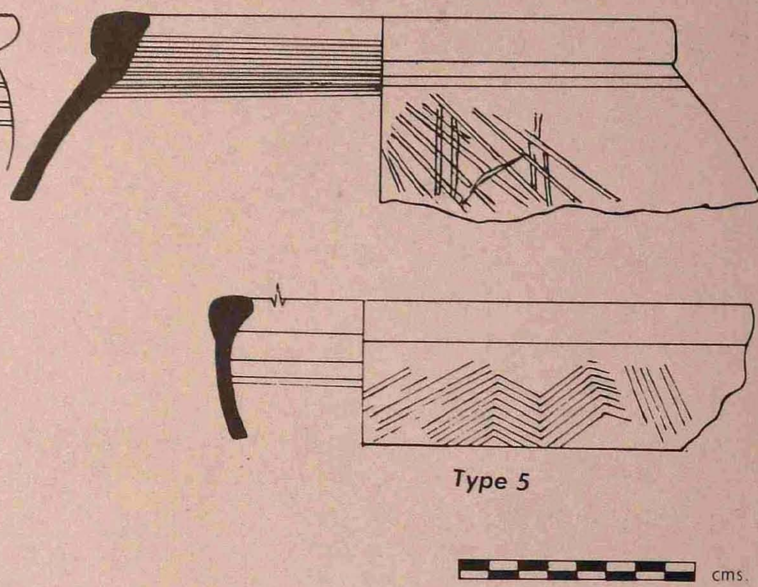
1. Iron slags
2. Grooved tiles
3. Socket stones and roughly hewn stone pillars.

1. Coins — Legend : S'rīmat Sāhasamalla
2. Dutch coins
3. Early British coins

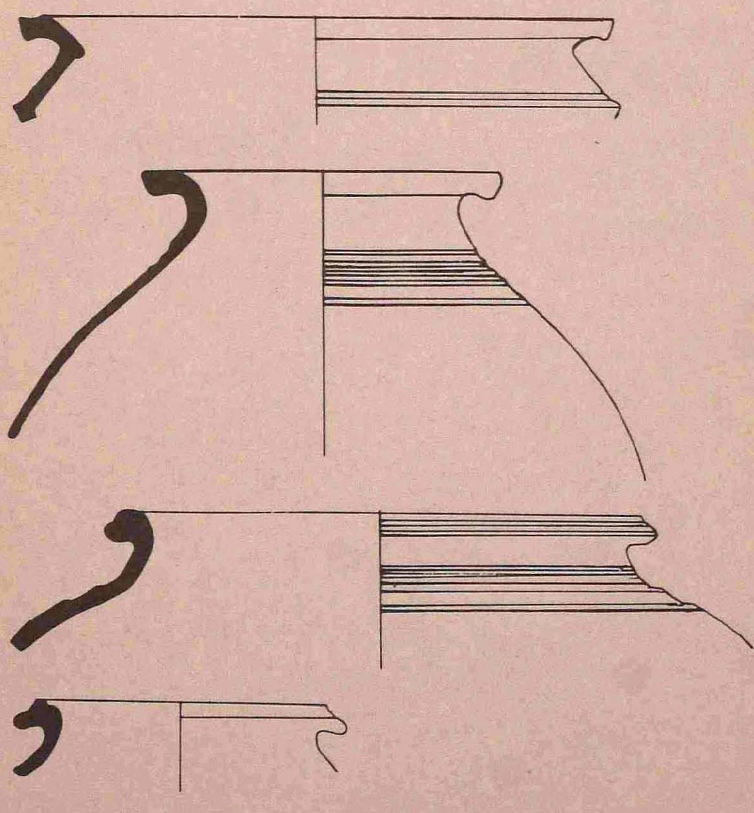
Plate 29 : *Pottery types — Pūmpukār colony and Maṇiyamtōṭṭam.*



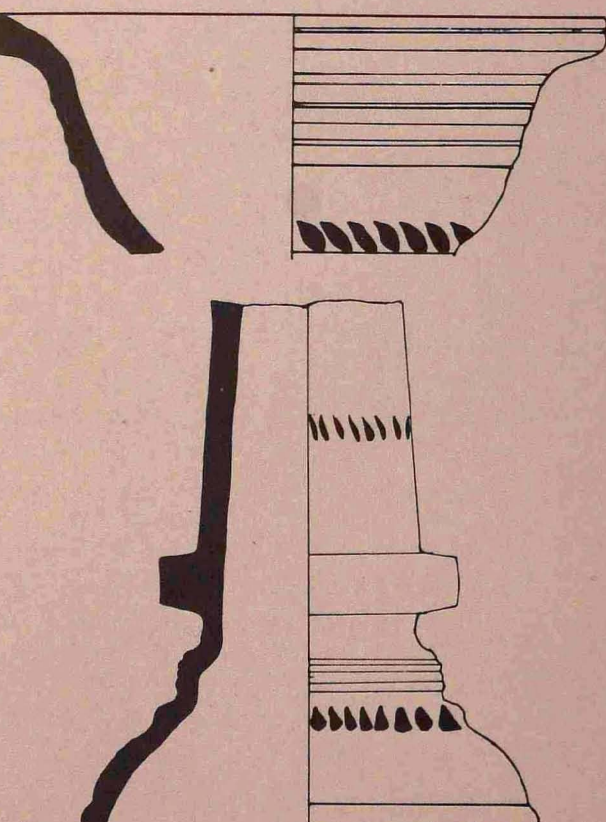
Type 2



Type 5



Type 8



Type 9

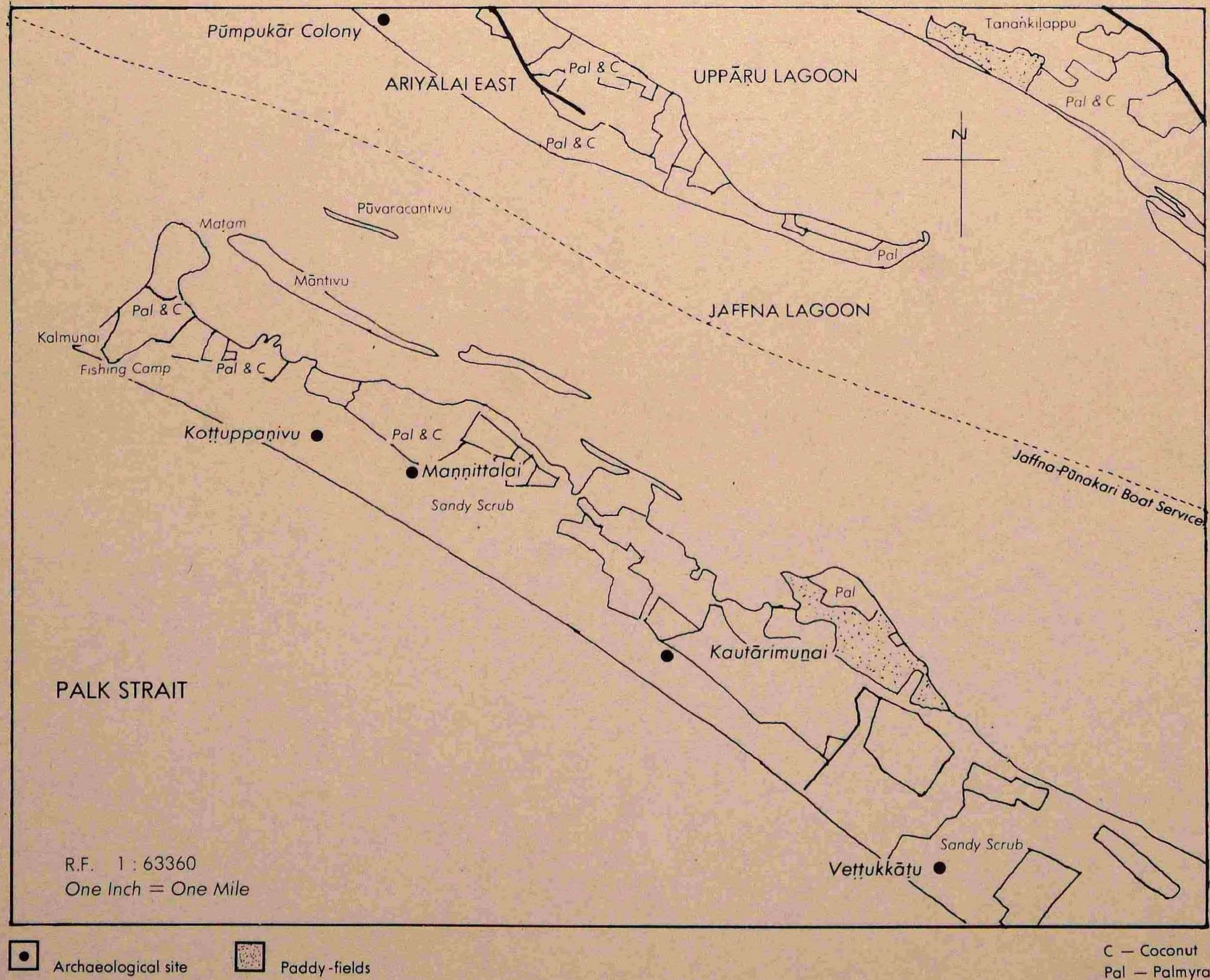


Plate 30 : *Maṇṇittalai and Ariyālai East — site map.*

Maṇṇittalai Sand-Bar Sites

Latitude :

9° 33′ 00″ N — Veṭṭukkāṭu
9° 33′ 55″ N — Kautārimuṉai
9° 35′ 10″ N — Maṇṇittalai
9° 35′ 30″ N — Koṭṭuppaṇivu

Longitude :

80° 08′ 00″ E — Veṭṭukkāṭu
80° 07′ 10″ E — Kautārimuṉai
80° 05′ 25″ E — Maṇṇittalai
80° 04′ 25″ E — Koṭṭuppaṇivu

One inch sheet no :

Pooneryn sheet A7, 8, 12, 13

Approach :

The sites could be approached through a cart tract or by walking along the coast from Pūnakari. They can also be reached by crossing the Lagoon either from the Jaffna jetty, or from Ariyālai East.

Description :

The Maṇṇittalai sand bar is visible from the Jaffna city, but is one of the remote areas of the District with sparce population. It can be clearly seen from the Ariyālai East archaeological sites. The whole stretch is full of high, shifting sand dunes tall enough to cover huge trees and palmyras.

Pottery distribution is observed sporadically along the 15 km. sand bar stretch that projects towards Jaffna city from Pūnakari. Veṭṭukkāṭu, Kautārimuṉai, Maṇṇittalai and Koṭṭuppaṇivu are some of the spots where intensive distribution of artifacts was noticed during our survey.

At Veṭṭukkāṭu, along the southern coast, Thick Rim Red Ware was found along with Chinese and Islamaic ware. Certain spots here yielded a few microlithic flakes and fluted cores of chert and quartz. At Kautārimuṉai Grooved Rim Ware, was seen along with a very late Black and Red Ware. Many pieces of terracotta smoking pipes were also found here. GRW was found near the near the Maṇṇittalai church too.

The earliest type of pottery in the whole stretch was obtained at Koṭṭuppaṇivu, located between the Maṇṇittalai church and Kalmuṉai, the tip of the sand bar. This site is covered with sand dunes in all directions and both the Palk Strait and the Jaffna lagoon could be seen from here.

Artifacts like the Early Carinated Black and Red Ware, Historic BRW, Rouletted Ware, Thick Rim Red Ware, lakshmi plaques and beads were found along with structural remains like socket stones of pillars, tiles, etc.

During our first visit, two or three shell-rubble mounds were observed in the spot where we collected ECBRW pieces, but they could not be seen during our second visit, after a year; they may have been covered by the shifting sand dunes.

Soil :

Sandy regosols and dune sand. At Kautārimuṉai there is a small patch facing the Lagoon where the soil is alkali and saline (grey loam).

Fresh-water sources :

Excellent, perennial, saline-free, groundwater is available in the wells. Even during the peak of the summer it is available at a depth of only two metres.

Coastal prospects :

The sand bar has a coast line of more than 30 kms, facing the Palk Strait in the south and the Jaffna lagoon in the north. From the top of the sand dunes of this stretch one could easily view both the coasts. The local people go for subsistence fishing in the Jaffna Lagoon.

For their communication with other areas and for their supplies they go to Pūnakari. Nowadays rarely do they use the Lagoon route to Jaffna.

Natural vegetation :

The area has a fascinating landscape and natural vegetation. While the huge sand dunes are along the Palk Strait coast, the Lagoon coast is marshy with its mangrove vegetation and scrub,like *Tāl̲ai, Kattāl̲ai, Paṭṭi,* etc. At certain spots, the sand dunes of the southern coast have been found moving towards the Lagoon coast and covering the natural vegetation. There are also huge trees, like *Marutu*, in some places indicating the presence of fresh ground-water.

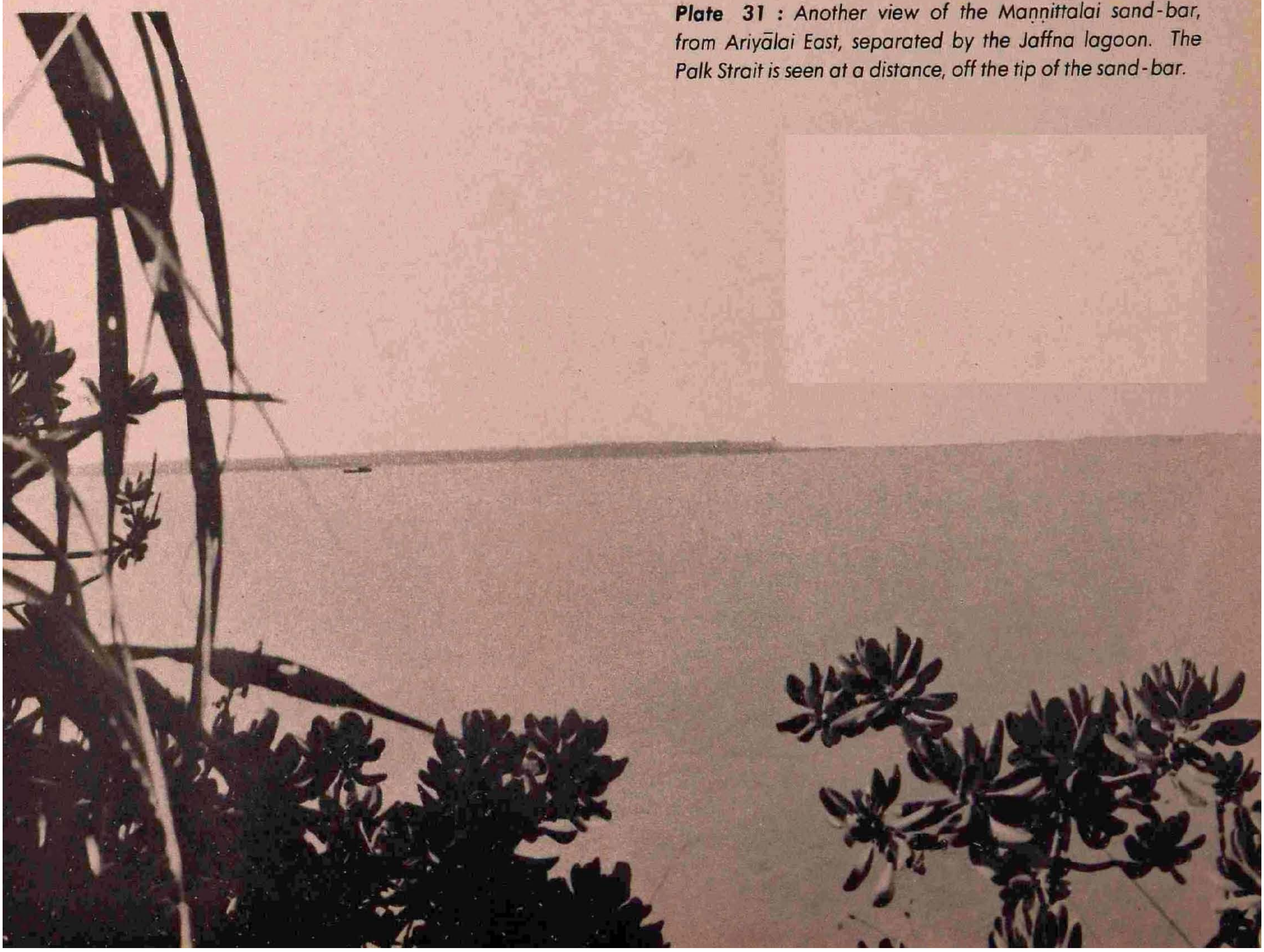
Grazing-land :

It is available along the Lagoon coast. Herds of a special kind of sheep, a typical variety of Jaffna, were found grazing here.

Present cultivation :

There are small coconut plantations but they are not productive. Paddy is cultivated in a small patch at Kautārimun̲ai along the Lagoon coast.

Plate 31 : *Another view of the Maṇṇittalai sand-bar, from Ariyālai East, separated by the Jaffna lagoon. The Palk Strait is seen at a distance, off the tip of the sand-bar.*



Availability of building material :

None

Disposition :

The sand bar has been an important link for communication between the Peninsula and the mainland. As the disposition of this area is analysed in detail elsewhere,[11] the salient features are given in a gist.

1. Geographically, Mannittalai sand bar is the nearest point to the Peninsula to cross the Jaffna lagoon and to reach the Main Island of Sri Lanka.
2. This passage was in a position to cater to the communication needs of the densely populated region of the Peninsula, i.e. Valikāmam.
3. This sand bar route is a natural projection of the old coastal trunk route of Sri Lanka which lay along the western coast of the Island, and was popularly in use till the early British times. This is evident from the disposition of the Dutch fort at Pūnakari.
4. The sand bar is capable of providing all the necessary requirements like fresh water, for travellers.
5. This stretch is also suitably located to establish outside contacts by sea-routes.

Remarks :

The pottery found at Koṭṭuppaṇivu associates this site with the earliest settlements of the Peninsula. The few pieces of Early Carinated Black and Red Pottery, pieces of Rouletted Ware, and lakshmi plaques easily date this site around the dawn of the Christian era, if not earlier. Unfortunately, the shifting sand-dunes have covered the archaeological deposits and only an excavation can definitely determine the antiquity of this site. The shell-rubble mounds observed here may provide some interesting clues in this respect.

Presumably this sand bar has seen human activity right from Mesolithic times, as a few microlithic flakes and cores were collected during our survey. This view was strengthened in a subsequent survey conducted along with the Sri Lanka Department of Archaeology, in which a microlithic habitation site was located at Maṇtakkal Āṛu, a few miles south of this sand bar.[12]

List of pottery types Koṭṭuppaṇivu

1.2/I /M Only one sherd was found
2.2/V /C
2.2/V /C/Pd
4.5/? /F
4.6/? /F
5.1/VII/C/Pd
5.2/V /M

List of other finds

1. Iron nails and tools (60 nails were found)
2. Iron slags
3. Rubbing stones :
   granite, sand stones; one seems to be made out of Deccan trap stone.
4. Socket stone of a pillar
5. Grooved tiles
6. Carnelian beads and paste beads
7. Blue glass beads
8. Orange glass beads
9. Green glass beads
10. Glass imitation of shell beads;
    green and yellow in colour
11. Fragments of other beads
12. Fragment of a lakshmi plaque coin
13. Fragment of a coin with *Svastika* mark
14. A Roman coin
15. Fragment of a coin, unidentified
16. Three microlithic flakes; (quartz and chert)

List of pottery types Kautārimuṉai

2.3/? /C
5.1/VII/M
6.5B/?
6.7/?
6.10/

All sub types of type 8 except 8.7 and 8.8 were found.

List of other finds

1. Iron nail
2. Iron slags
3. Terracotta and stone smoking pipes
   (a number of them were collected)
4. Conch shell with a hole on one side
5. A microlithic flutted core of chert
6. Carnelian and paste beads

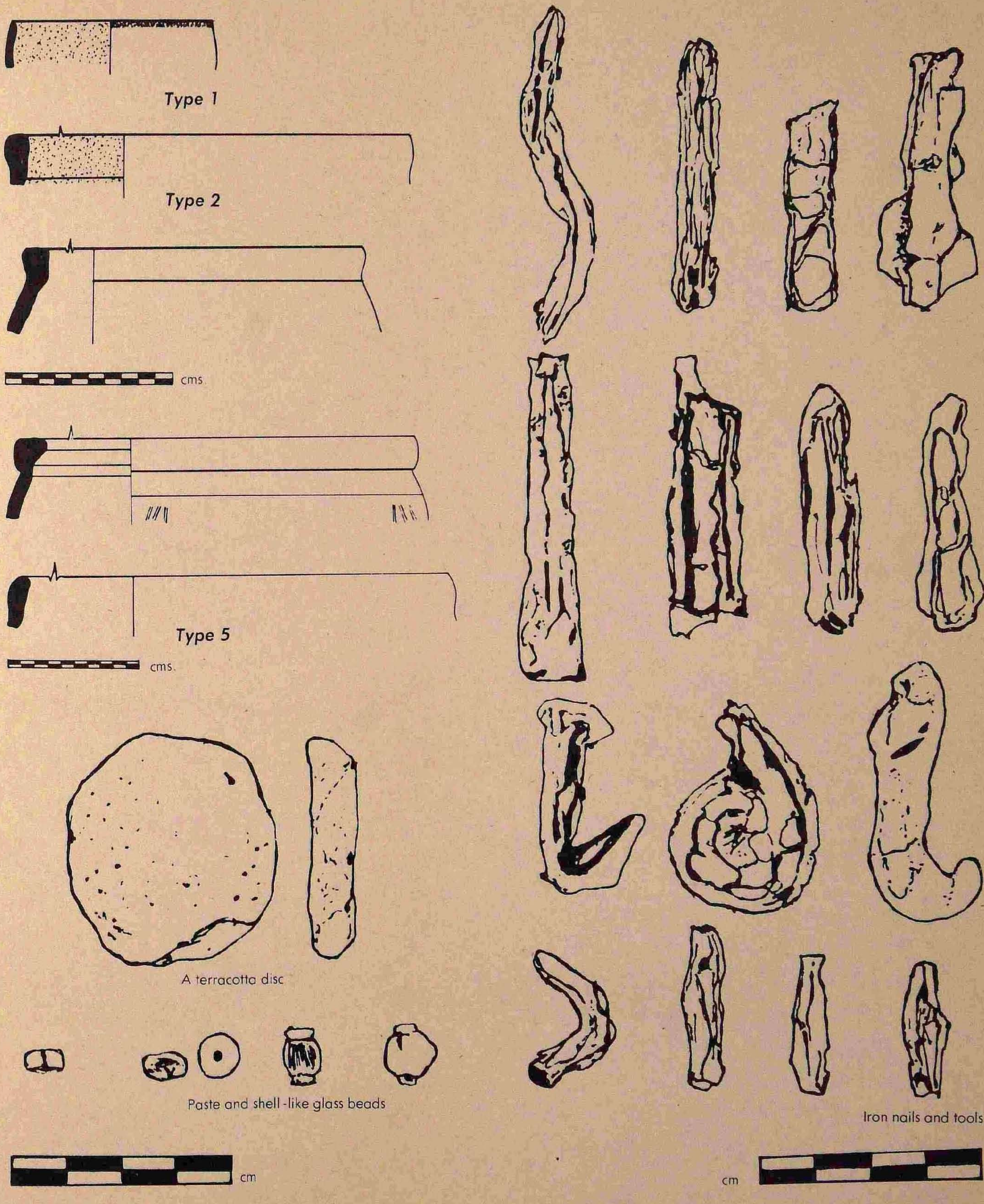
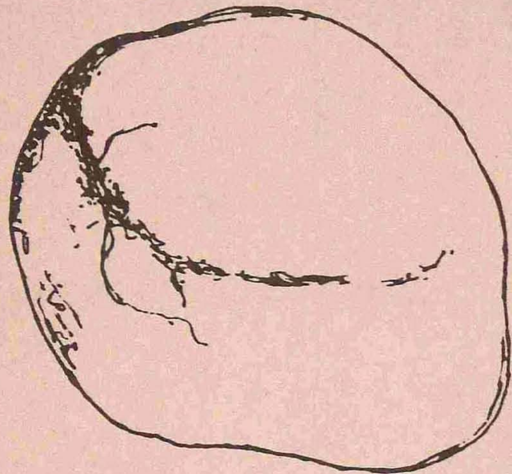


Plate 32 : *Pottery types and other finds — Koṭṭuppaṇivu, Maṇṇittalai.*

Rubbing stone or pestle stone



Rubbing stone or pestle stone (fragment)

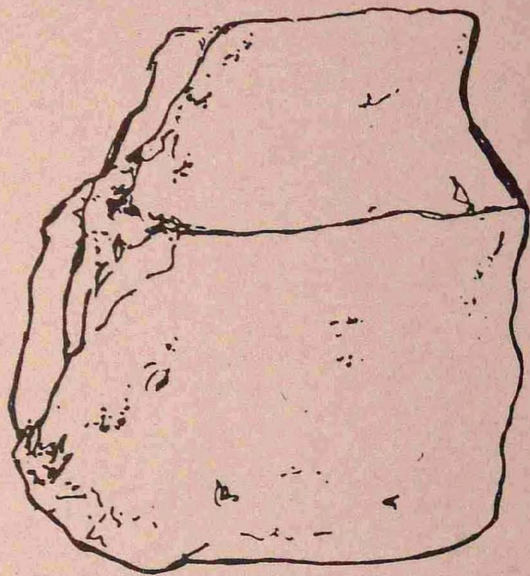
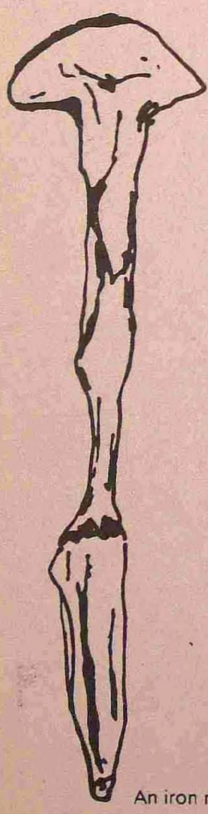
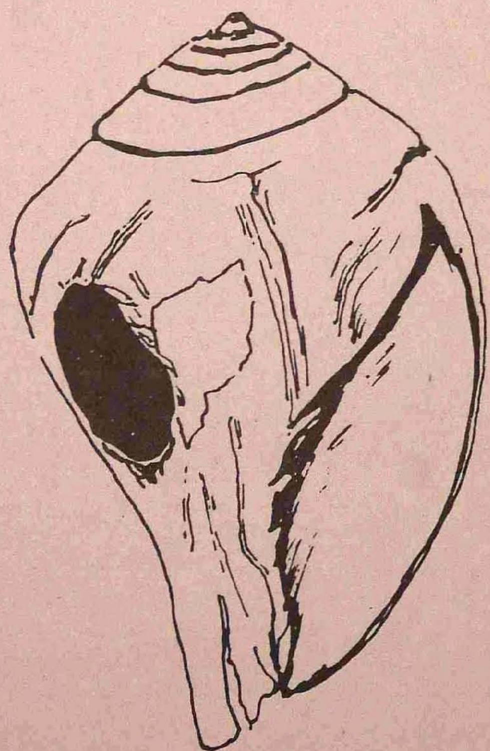


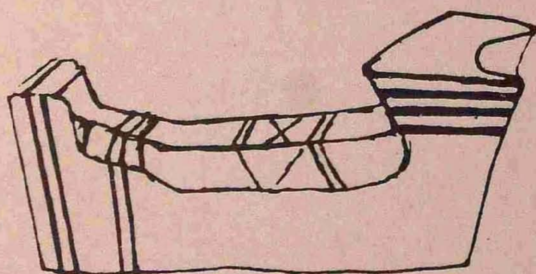
Plate 33 : *Finds from Kottuppanivu and Kautārimuṉai.*



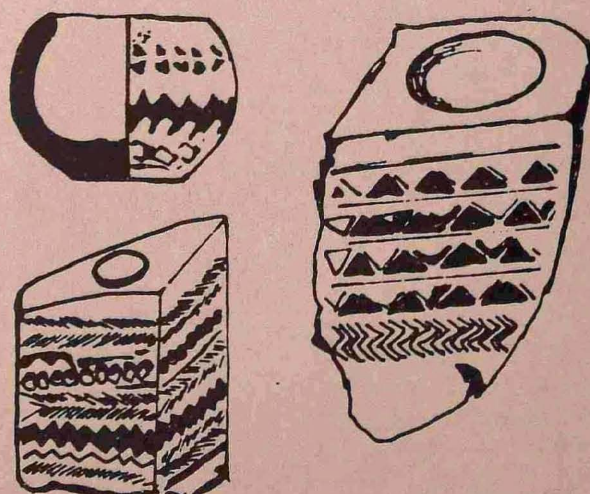
An iron nail



Perforated conch, probably used to tie on the neck of an oxen.



Terracotta smoking pipes





Cattirantai — Kārainagar

Latitude :

9° 43′ 30″ N

Longitude :

79° 52′ 30″ N

One inch sheet no :

Jaffna A^A21, 22 A1, 2

Mosaic sheet no :

Al

Approach :

The site is at Cattirantai in the Kaḷapūmi area of Kārainagar island. It is adjoining the Sundaramūrti Vidyālayam Junior School.

Description :

The site covers an area around 5-10 acres. it is an elevated land on the fringe of the paddy fields. It was reported that this whole site was once owned by American Missionaries and was registered under one *Tompu* (land deed). Now it has been divided into 5 plots; one is occupied by the Junior School, and the others are private lands. The plot, where we later conducted the rescue excavation belongs to Mr. A. Kandasamy. He bought this plot 15 years ago, and was astonished to find skeletons while constructing his house.

Since then, all these years he has been selling the earth from the undulating dunes, partly because of the demand, and partly to level his land.

During our survey at Kārainagar, we were informed by a tractor driver about the presence of potsherds in the scooped earth here, and the site was visited by us along with Dr. S.K. Sitrampalam of the University of Jaffna. The presence of a few pieces of Early Carinated Black and Red Ware sherds on the surface made us suspect a Megalithic layer here.

Soil :

The soil type is grey loam or Alkali and saline. To be more precise, the soil of the dunes was hard clay dumped from the nearby paddy fields.

Water resources :

Many parts of the Kārainagar island suffer water scarcity during summer. But there are two spots known for perennial fresh water supply. One is in the coastal sand dunes near the northern coast line, and the other in the paddy-fields in the centre of the island where presently a water supply scheme has been organized. The Cattirantai site borders the paddy-fields and thus is near the perennial fresh-water source.

Coastal prospects :

The site is located almost at the centre of the Island, having access to both the Palk Strait and to the Jaffna lagoon. The Island of Kārainagar has ample coastal prospects by its disposition which is discussed subsequently.

Natural vegetation :

Palmyra and scrub, typical of the paddy field mounds.

Grazing-land :

Available in the paddy-fields.

Present cultivation :

Paddy during the wet season, pulses, sesame and other minor crops during the dry season.

Availability of building material :

Coral stones from the coast.

Disposition :

As discussed under the Vērappiṭṭy exploration report[13] the island of Kārainagar is in a strategic disposition of the Peninsula. Two of its coasts check the entrances of the Jaffna lagoon and another faces the Palk Strait. This Island is one of the nearest points of Jaffna to reach the Tañcāvūr District of Tamilnadu.

Local legends :

The legends record that a number of corpses were buried here during an epidemic outbreak. However, we are not sure about the authenticity of this legend and the date of the epidemic.

Remarks :

A rescue excavation conducted later at this site confirmed the presence of a Megalithic burial stratum, the report of which follows.[14]

Plate 34 : *Megalithic burial site, Cattirantai, Kārainagar.*



List of pottery types :

1.1/II /M
2.2/III /M
4.9/II /F
5.2/V /M
9.3/? /C

List of other finds :

Iron slags

The owner of the plot reported that he found a gold hair ornament in the scooped earth earlier.

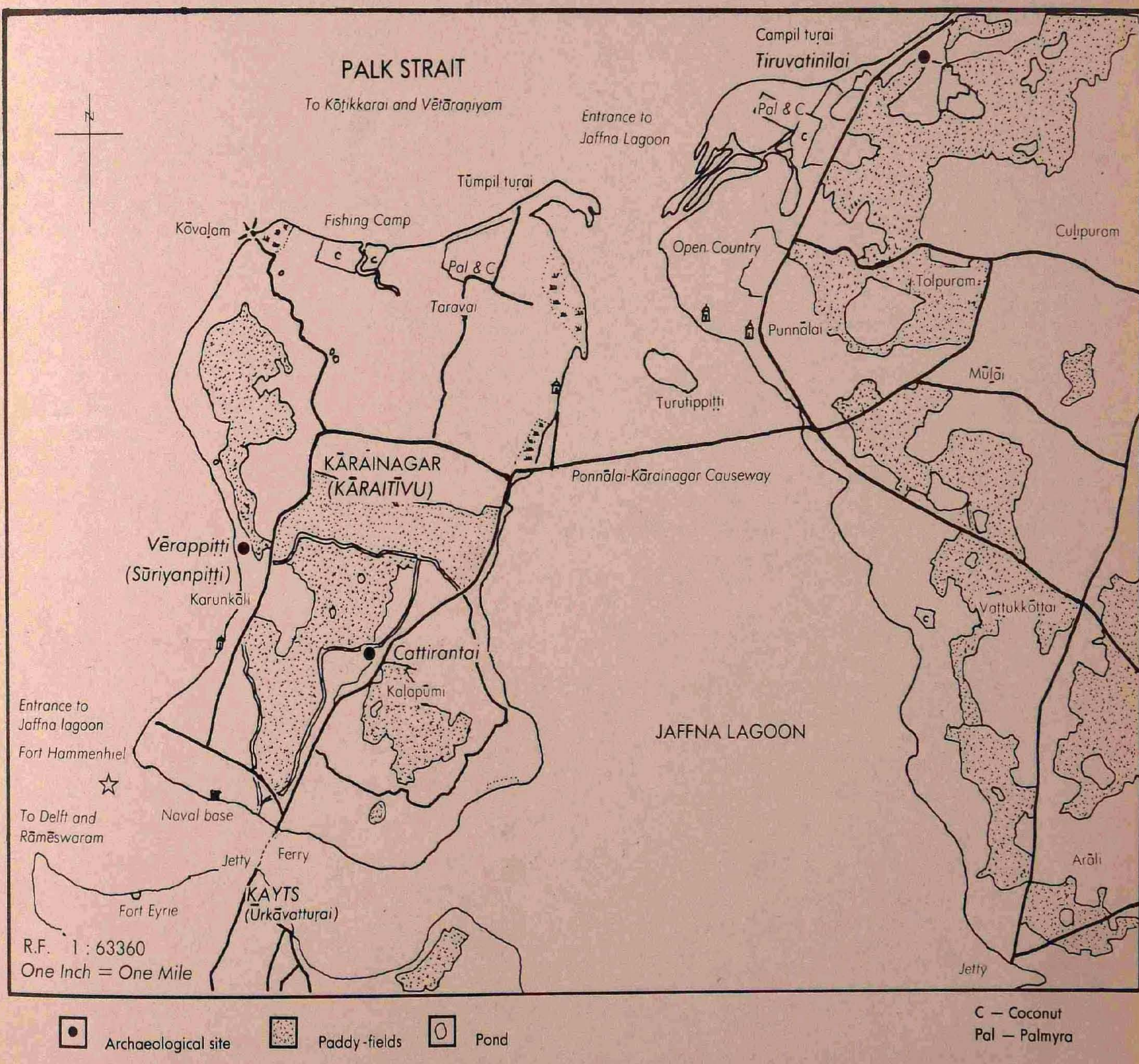


Plate 35 : *The island of Kārainagar — site map.*

Vērappiṭṭi — Kārainagar

Latitude :

9° 44' 00" N

Longitude :

79° 51' 30" E

One inch sheet no :

Jaffna Sheet A^A21, 22, A1, 2

Mosaic sheet no :

A1

Approach :

The site is also known as Cūriyanpiṭṭi or Elumiccaṅkaṉṟaṭy. It is along the western coast of the Kārainagar island and can be approached by the bus route known as the 'western road'.

Description :

The site is a mound of considerable height facing the sea in an area of about 5 acres. Chiselled coral stones, still having traces of lime plaster, semi-circular stepping stones made out of Jaffna limestone, socket stones of pillars and tiles were found scattered in the vicinity confirming the structural nature of the remains in the site.

A few years ago, the mound was dug across to make a path for the sand-scoopers to reach the neighbouring sand-dunes. A part of chiselled coral stone base-line was then noticed.

Soil :

The soil of the hinterland falls into the category of alkali and saline soils, but as this site is a coastal one, the soil here is sandy regosol. On the southern side of the site there are huge sand-dunes, which are now being exploited by the earth-scoopers.

Fresh-water sources :

Fresh-water is available in the wells in the nearby paddy -fields, but in the peak of summer the water goes saline and people have to go further into the interior of the paddy-field to get fresh water.

Coastal propsects

The site is so close to the sea that the western side of the mound actually merges with the shoreline. The sea forms a bay here which is ideal for an entrepot. It is now used by small catamarans and fishing boats.

Natural vegetation :

Palmyra and *chāya* root.

Grazing land :

The paddy-fields of the hinterland are used for grazing after the harvest.

Palmyra and *chāya* root. The name of the site derived from the natural vegetation *Vēr* (denotes Chāya root in Jaffna Tamil). Piṭṭi means elevated area or dune.

Present cultivation :

Paddy is cultivated once a year in the traditional agricultural lands situated in the centre of the Kārainagar island. If the rains are fair, minor crops like sesame, ragi (*kurakkaṉ*), pulses, etc. are cultivated in the dry season. The site is actually sandwiched between the coast and these paddy-fields.

Availability of building material :

Coral stones are found in plenty along the coast.

Disposition :

Just like the Camputturai site[15] which is at the entrance of the Jaffna lagoon and at a point nearest to south India, the site of Vērapiṭṭi is at a disposition from where it can cover the other entrance of the Lagoon — the Kayts channel. Three of the Islands off Kayts, namely, the Eluvaitīvu, Paruttittīvu, and Analaitīvu, could be seen from this spot. The fort Hammenhiel which was constructed by the Dutch to guard the entrance to the Jaffna lagoon is near the site and at a visible angle. The major naval unit of the Government of Sri Lanka in the North is also stationed within two kilometres from the site, indicating the continuity of the strategic importance of this spot.

Local legends :

The legends record that spirits dwell in the area. There are two folk temples nearby to worship Nāccimār (seven maidens) and Aṇṇamār (warrior ancestors worshipped especially by the toddy tappers).

It should be noted that a famous Aiyanār temple in Kārainagar — Viyāvil Aiyanār temple — is near this site. This temple is of recent construction. Records mention that the original temple was destroyed by the Portuguese[16]. Local lengends also state that the chiselled coral stones from the demolished temple were passed by hand through a line of labourers and were used in the construction of the Fort Hammenhiel.

Remarks :

The analysis of pottery and other artifacts places the lower date of this site in the early centuries of the Christian era and the upper date in the beginning of this millennium. The strategic disposition of the site mentioned earlier could be the reason for its emergence.

The Cattirantai Megalithic burial site is located at a distane of 1.5 km from this coastal site and can be seen across the paddy field stretch that separates these sites.[17]

The *Jātaka* tales, ascribed to the early centuries of the Christian era, refer to this island as Kāradīpa (Tamil — Kāraitīvu) and mention its sea route connections with Kāvērippaṭṭinam (Coromandel coast) and Tāmralipti (Bengal).[18]

As a *modus vivendi* of such sites in the Peninsula, syncretisation of earlier Buddhist faith with the Aiyanār cult could be envisaged in the case of Vērappiṭṭi and Viyāvil.[19]

Considering its strategic location, this site can be identified as an entrepot which existed parallel to or as a predecessor to the Kayts harbour.

List of pottery types

2.2/V /M
2.2/VII/M/Pd
5.1/VII/M
5.1/VII/M/Pd
5.2/V /M/Pd
6.7/? /
8.1/III /M

List of other finds

1. Chiselled coral stones with lime-plaster on it
2. Half circle limestone stepping-stone
3. Socket stones
4. Iron slags
5. Grooved tiles
6. Carnelian and paste beads.
7. Blue glass beads

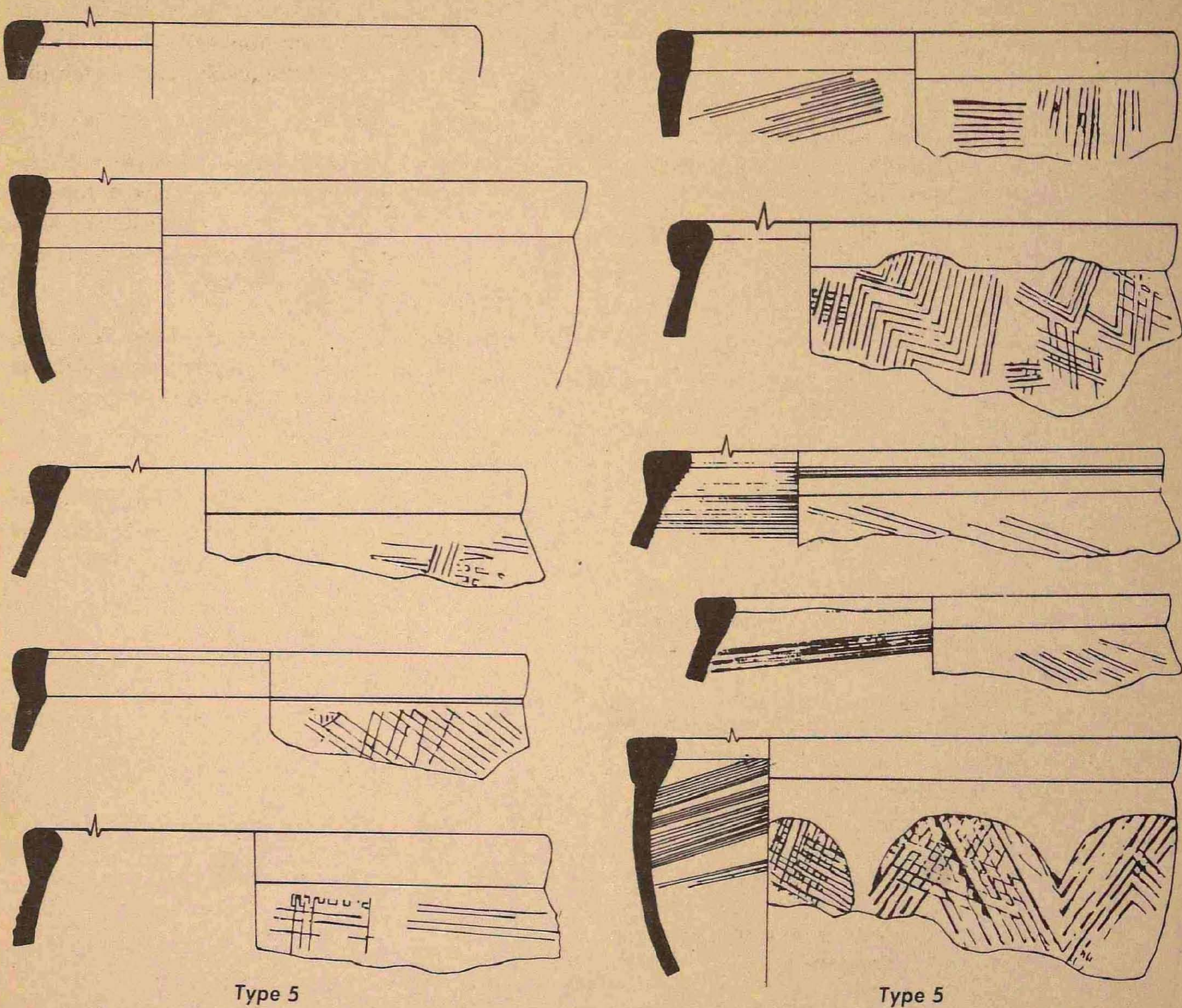


Plate 36 : *Pottery types — Vērappiṭṭy, Kārainagar.*

Tiruvaṭinilai, Kāṭṭuppulam, Ticaimaḻuvai — Camputturai Sites

Latitude :

9° 46′ 40″ N — 9° 47′ 10″ N

Longitude :

79° 56′ 00″ E — 79° 56′ 45″ E

One inch sheet no :

Jaffna Sheet AA21, 22, A1, 2

Mosaic sheet no :

AA 22

Approach :

The sites are in a stretch, mainly south of the Poṉṉālai-Kīrimalai coastal road, between Tiruvaṭinilai and the Mātakal crematorium.

Description :

This is a complex of sites, along the coast, yielding artifacts over a stretch of one kilomter. At Ticaimaḻuvai pot sherds were found in the wind-blown layer of fine sand. Heavy scooping of earth here had exposed pottery deposits at many places. The Kāṭṭuppulam Aiyaṉār temple which lies south of Tiruvaṭinilai seemed to incorporate earlier remains in its present structure. Lime-stone slabs and potsherds were found here.

At Kāṭṭuppulam another spot near the road was excavated by the Department of Archaeology a few years ago. Structural remains like bricks, foundation stones, socket stones of pillars, and tiles were observed in the abandoned trenches along with other items like potsherds, slags, etc.

Sherds were also collected from the sea, a few yards from the shore.

Soil :

The soil is wind-blown fine sand about 1 m thick and deposited upon a coral and shell layer. This stratigraphy was noticed in the dug-out spots.

Fresh-water sources :

Fresh-water is available even at the peak of summer at a depth of 2-2.5 metres. Here the water oozes in a coral layer that lies beneath an ashy silt. It is different in taste from the normal limestone ground water of the Peninsula.

There are many small ponds and tanks in the hinterland. A flood outlet runs into the sea near Ticaimaluvai. During the rainy season these small ponds get filled and a considerable amount of water reaches the sea as surface run-off.

Grazing-land :

After the harvest, paddy-fields become grazing grounds.

Natural vegetation :

Palmyra and scrub. Palmyra palms are found in heavy concentration. *Chāya* root is frequently noticed as surface cover.

Present cultivation :

The hinterland comprises the villages of Poṉṉālai, Tolpuram, Culipuram, Paṟāḷāi, Cillālai and Mātakal. Paddy is cultivated once a year in the traditional fields of the area. *Paṟāḷāi Vināyakar Paḷḷu*, which was composed in the Dutch times, vividly describe the traditional system of paddy cultivation in this region.[20]

Availability of building material :

Coral is available in plenty.

Disposition :

The whole stretch of the sites faces the sea, and the sea forms a convenient, reef-free bay in this spot. The area is known in Tamil as Campilturai or Camputturai (turai — port).

The site could have been a key port providing access to the interior settlements of the Peninsula. It could have also served as an entrance to the Jaffna lagoon, if the present silted channel between Kārainagar and Ponnālai was navigable in those days. Above all, this location is the nearest point to the Coromandel coast of Tamilnadu.

Local legends :

The site has many legends. It is identified with the famous port of Jambukola mentioned in the Pāli chronicles, where Sanghamita landed with the sapling of the sacred Bo tree.[21] A local legend identifies the archaeological remains of the area as those of the demolished temple of Campēsvaran.[22] Presently there are a number of folk temples nearby; and in the surrounding paddy fields. Some notable deities are *kotti kilavan* (the husband of *korravai* — Sivan); *Periyatampirān* (Sivan); *Ālvattai* (a female deity) etc.

Remarks :

Legends and literary records mention this place as the earliest known port of the region. Scholars who did pioneering work in the history and archaeology of the Peninsula also anticipated finding an early settlement in this place.[23] But unfortunately during our survey, we could not find any evidence even of a settlement datable to the dawn of the Christian era. The pottery and other artifacts date the settlement only to the early centuries of the Christian era. Three probable explanations could be given for this :

1. The extensive nature of the artifact distribution in this area indicates that this must have been an important settlement and continued so, for a long time. It is possible that the earlier settlement could be somewhere underlying the later deposits and was not evident during our surface exploration.



Plate 37 : *Kāttuppulam — pond and the Aiyanār temple. Photographed in the month of November when the pond was full. The temple is situated in the grove seen beyond the pond.*



Plate 38 : *Aiyanār temple, Kāttuppulam.*

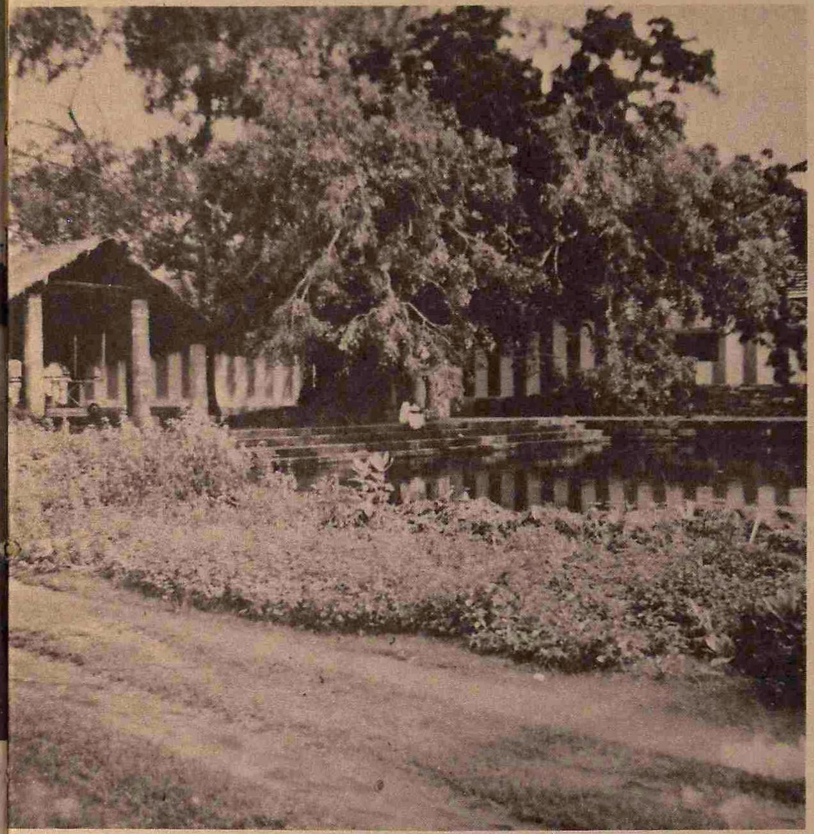
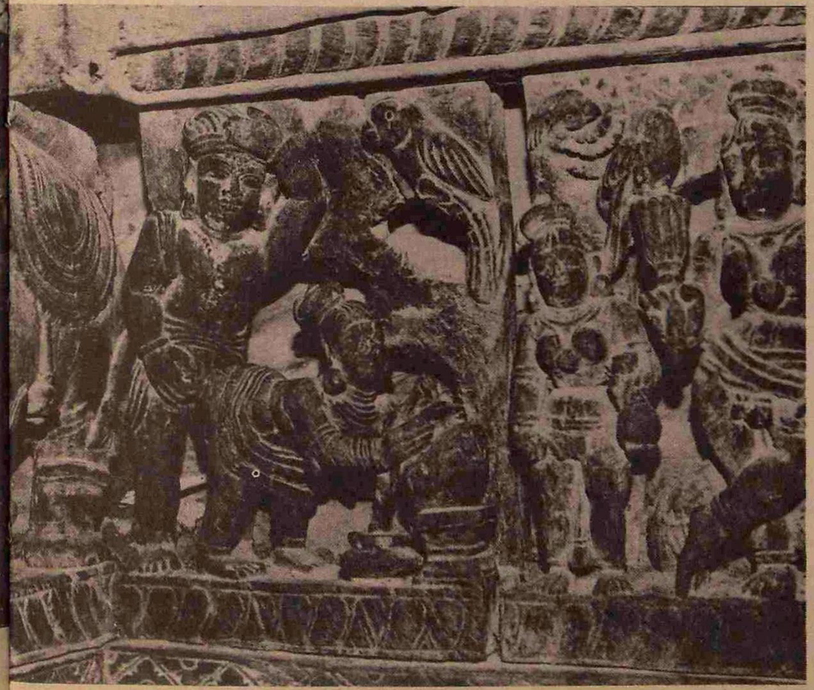


Plate 39 : *Pillaiyār temple at Parālai. Local legends associate the bo-tree seen in the photo with the one brought by the Asokan emissary.*





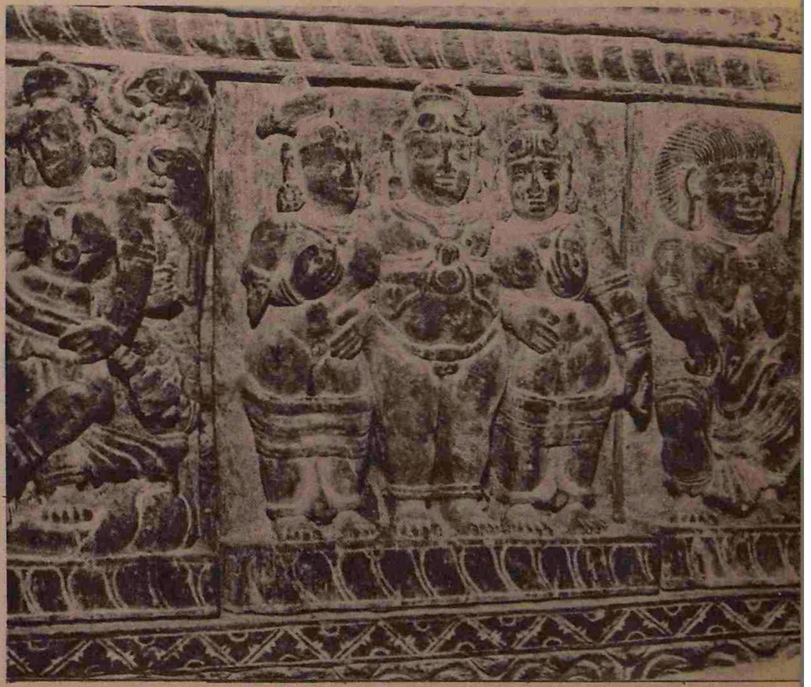


Plate 40, 41, 42 : *Wooden panels from the 'ter' (temple car) at Parālai, said to be the oldest in Jaffna.*

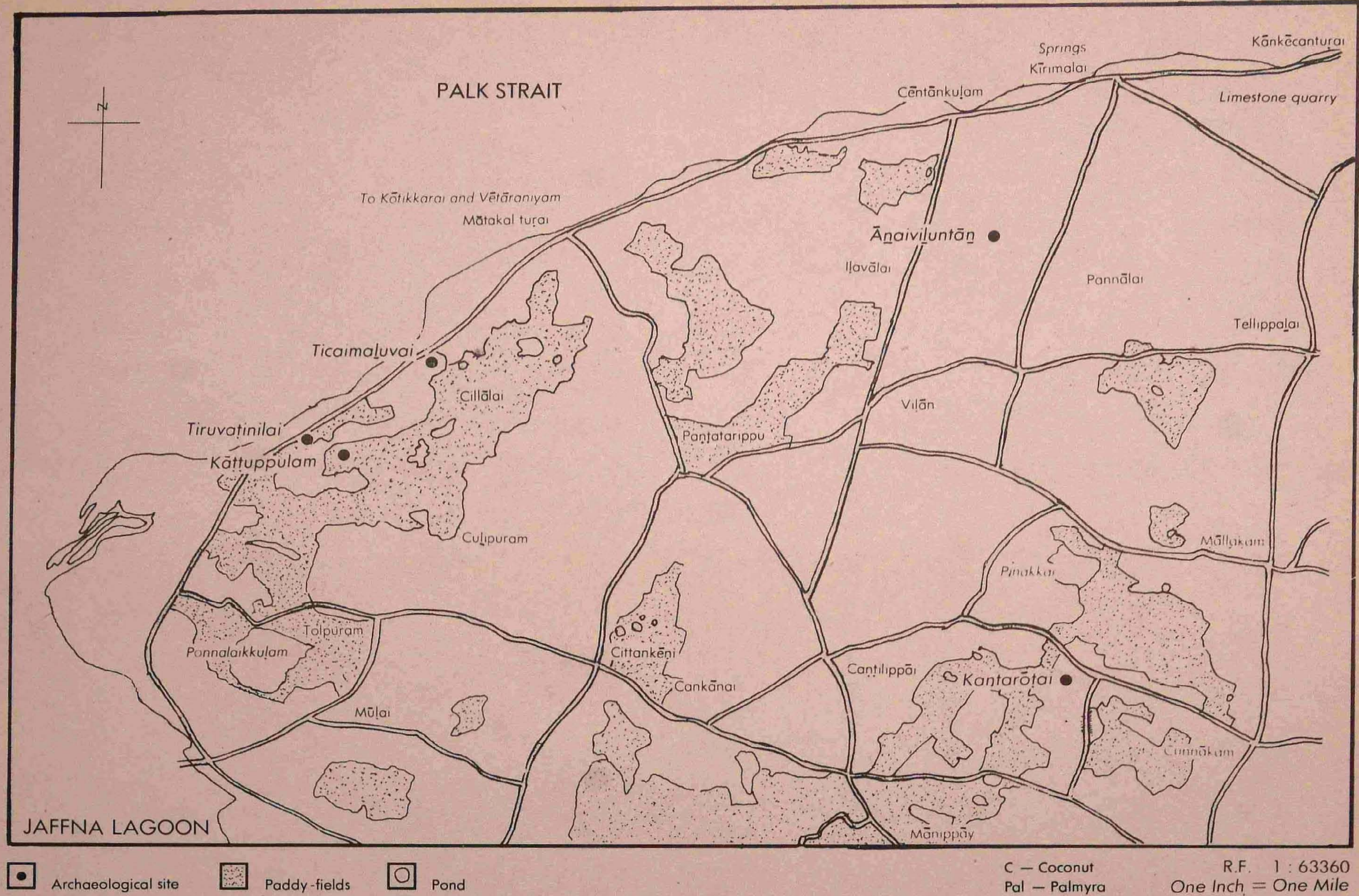


Plate 43 : *Camputturai, Aṉaiviluntāṉ, Kantarōṭai — site map.*



Plate 44 : *Paddy-field hinterland of Camputturai.*

2. The nucleus of the settlement which belonged to the earliest stratum could have been submerged by the sea. This view is supported by the presence of potsherds in the coastal sea-bed and by the local legends which refer to artifacts in the sea. During the survey we met people who claimed to have witnessed the encroachment of the sea, submerging evidence like ring wells, etc.

3. The story, identifying this site with an earliest entrepot of the region could be a later one.

Ticaimaluvai List of pottery types

2.2 (2.1 ?)/III/M
3.5 /III /M
5.1 /VII/M
5.2 /V /M
5.2 /V /M/Pd
5.3 /V /M

The pottery at Ticaimaluvai was found coated white probably because of the soil at Ticaimaluvai.

List of other finds :

1. Grooved tiles
2. Iron slags
3. Socket stones of pillars
4. Torso of a marble figurine

Kāṭṭuppulam List of pottery types :

5.1/VII/M
5.1/VII/C
5.2/V /M

List of other finds :

1. A stone pinacle
2. Limestone roller-pestle and quern

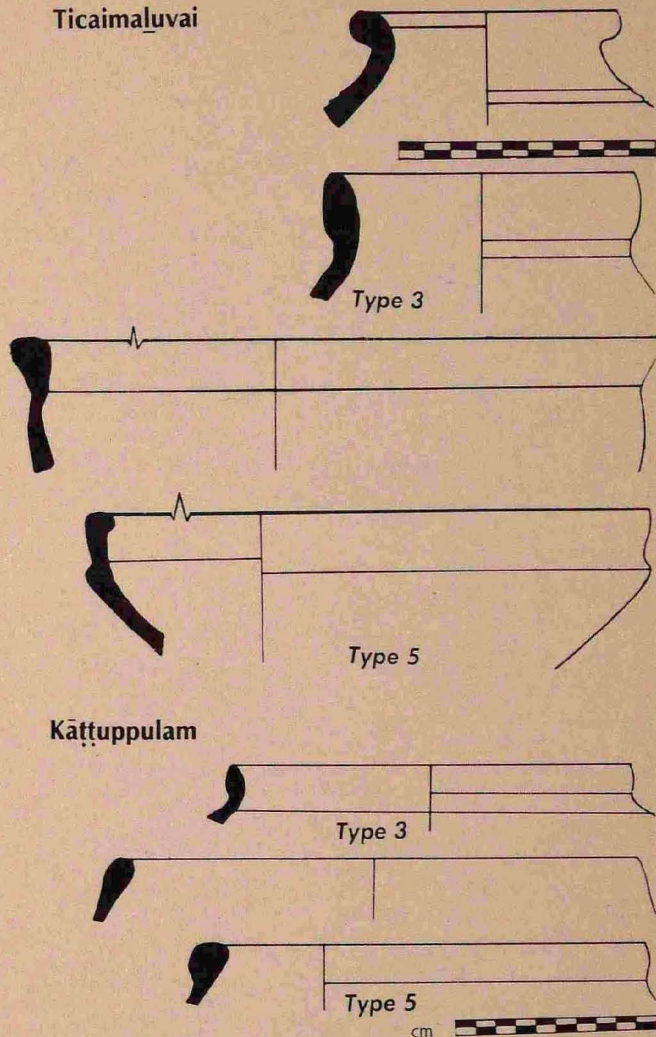


Plate 45 : *Pottery types — Ticaimaluvai and Kāṭṭuppulam.*

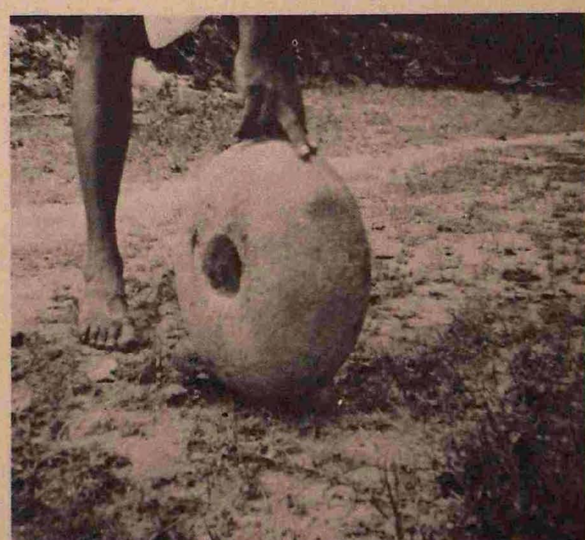


Plate 46 : *A movable socket-stone found at Kāṭṭuppulam.*

A̲naivil̲untān̲ — Iḷavālai

Latitude :

9° 47' 50" N

Longitude :

80° 00' 00" E

One inch sheet no :

Jaffna A^{A} 21, 22, A1, 2

Mosaic sheet no :

AA22

Approach :

The site is the Ān̲aivil̲untān̲ Piḷḷaiyār temple premises and it lies by the side of the Pannālai-Iḷavālai road.

Description :

At present, there are no significant surface remains, but the whole temple premises are slightly high and it was reported that bricks were found while digging for the temple renovation. During our survey we were able to collect many Thick Rim Red Ware sherds and a few grooved tiles in the surrounding areas of the temple which confirmed the antiquity of the site.

Soil :

It is a rough terrain with limestone rock outcrops, and calcic red-yellow latosol earth (red loam).

Fresh-water sources :

Wells are the source, and water is available at considerable depth under the limestone bed rock. There are no tanks in the vicinity, but a flood outlet was found nearby.

Natural vegetation :

Palmyra, and scrub. The scrub is mainly *Āvaracu* and *Chāya root.*

Grazing-Land :

Suitable only for goats and sheep.

Availability of building material :

The area yields large chunks of good limestone which can be chiselled and used for constructions.

Present cultivation :

Generally not suitable for cultivation but nowadays the area is known for its recently introduced grape vineyards.

Disposition :

It is around 1.5 km south of the Palk Strait coastal village Cēntān̲kulam, an adjoining fishing settlement of Kīrimalai.

It seems difficult to determine the reasons for its disposition in this location but as the local legend goes probably it was a wayside worshipping centre.

Local legends :

The local legends record hidden treasure in the area guarded by spirits. They also connect the site with the Mārutapuravalli legend, which says that the elephant of Mārutapuravalli fell down here while she was traversing the highway towards Māvittapuram.[24]

Remarks :

The presence of grooved tiles and bricks denote this as a structural site. As mentioned earlier it could have been a wayside worshiping centre.

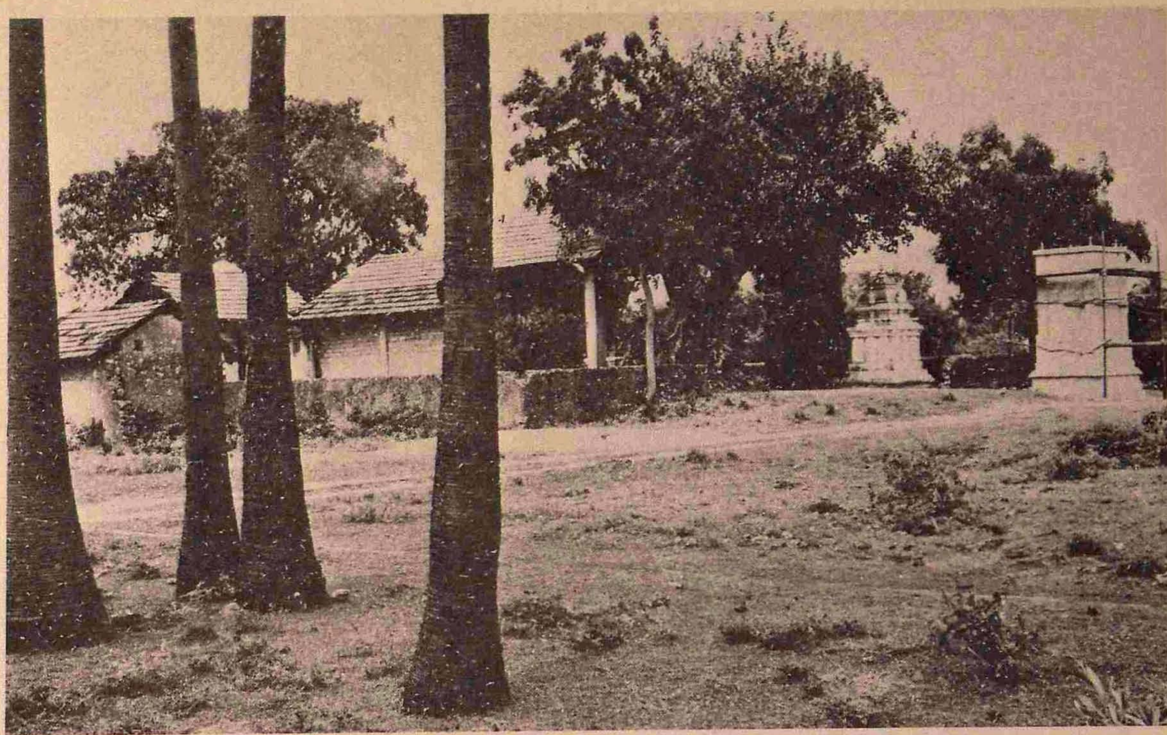


Plate 47 : *A̱ṉaiviḻuntāṉ Piḷḷaiyār temple. The present structure stands on an earlier archaeological site.*

We assign this site to medieval times, but earlier to the emergence of the kingdom of Jaffna on the strength of the pottery type which was solely Thick Rim Red Ware.

The *Chāya* root grows here abundantly as a natural vegetation. The root of this plant yields a vermilion colour dye which was used by the traditional textile industry of the Peninsula. During Portuguese and Dutch times it was one of the main sources of income and an item for export.[25]

This plant is a common natural vegetation in a number of archaeological sites of the Peninsula.

Āṉaiviḻuntāṉ area must have been an important location for *Chāya* root dye production as still the place-name *Vērkkutti Kaṭavai,* (root-diggers' pass) and the caste name *Vērkkutti Paḷḷar* (root digging agricultural labourers) survive in this locality.

List of pottery types :

3.2/III /C
5.1/VII/M
5.2/V /C
5.2/V /C/IC

List of other finds :

1. Grooved tiles

Plate 48 : *Pottery types — Āṉaiviḻuntāṉ.*

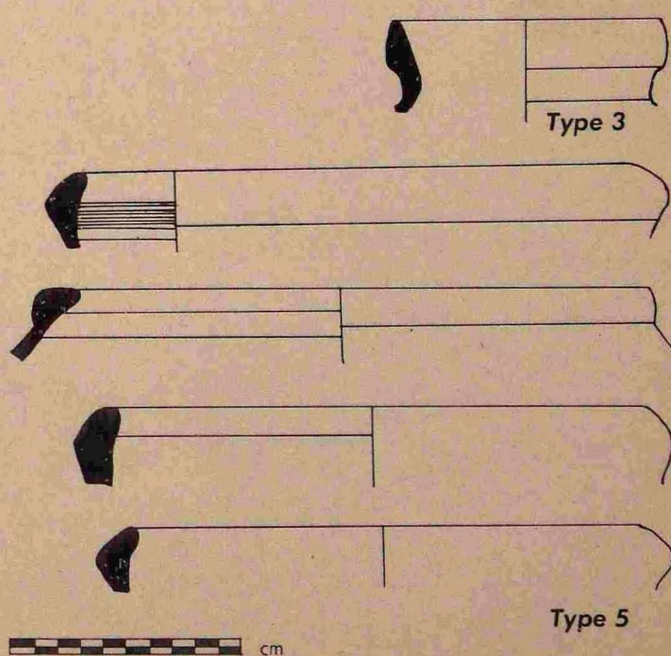




Plate 49 : *A miniature stupa, around 0.5 m in height and made out of the local limestone, found in the lower layers of the stupa-complex at Kantarōṭai.*

Kantarōṭai

Latitude :

9° 45′ 00″ N

Longitude :

80° 00′ 20″ E

One inch sheet no :

Jaffna AA 21, 2, A1, 2

Mosaic sheet no :

A2

Approach :

Kantarōṭai is a small village, now situated about 1 mile from the market town Cuṇṇākam, on Cuṇṇākam-Mākiyapiṭṭi road.

Description :

The entire village of Kantarōṭai, about 2 sq. km in extent, is an archaeological mound, with a heavy concentration of artifacts. The site is considerably high in elevation compared to neighbouring areas, and is around 28′-30′ above Mean Sea Level. This is the best known and comparatively well studied archaeological site in the Peninsula, deservingly being one of the first urbanized centres in the entire Island.

The importance of this site was realised as early as 1918, when Sir Paul E.Pieris conducted an excavation here.[26] In the past many years, the Department of Archaeology has been engaged in a small scale horizontal excavation at this site. This has brought to light a cluster of Buddhist structural remains constructed with the Jaffna lime stone and coral stones. However, the motives of the Dept. of Archaeology in excavating Kantarōṭai were not scientific and academic. The Department was interested only in highlighting the Buddhist monuments and in reconstructing them. But Kantarōṭai was farther anterior and wider in perspective than conceived by the government department. A pre-Buddhist megalithic phase at the early levels of the settlement was brought to light by the University of Pennsylvania Museum team in 1970.[27] They excavated at a short distance away from the Buddhist remains and confirmed the presence of a rich megalithic phase beneath the Buddhist as well as Rouletted ware layers. We had the opportunity of looking into the pottery bags of this excavation. They point to a sequence of Rouletted ware overlapping Megalithic ECBRW. Unfortunately, the report of this excavation is yet to be published.

However, in an article published in 1973, Vimala Begley who was the director of this excavation, briefly discussed the results of the research and assigned the beginnings of the Megalithic culture at Kantarōṭai to c. 4th century B.C.[28] This was before receiving the C_{14} dates for the samples.

The C_{14} dates (calibrated) were recently obtained by Mr.S.Deraniyagala from Bennet Bronson who was a member of the excavation team. Most of the dates out of the 14 samples range between 500 B.C.-100 B.C., while the dates of two of the samples go back to the second millennium B.C. These are the only absolute dates so far obtained in the archaeology of Jaffna peninsula.[29]

Regarding the Buddhist phase, though the government department is engaged in excavating them horizontally for the last several years, there are no published records. It seems by observation that there were atleast 4 or 5 phases of constructions.

The pottery bags of these excavations deposited at the Jaffna museum contain TRRW, and some, in association with Grooved Rim Ware. Hence, the latest phase of the monuments seems to have survived to the beginnings of this millennium. But the origins of the Buddhist phase and its relationship with the Megalithic culture are yet to be ascertained.

There are three epigraphical evidences from Kantarōṭai : (a) 3-2 century B.C. Brahmi, Prakrit legend on a potsherd now deposited in the Jaffna museum. The legend *'tatahapata'* means 'this vessel belongs to Tatta'; (b) a carnelian seal with a legend *vishṇubhūtis'ya*. The seal is said to have been given to Dr. Paranavitana and now is not traceable; (c) a 9th century Sinhalese inscription, now displayed at the Jaffna museum.

A few sculptures of Buddhist iconography found at Kantarōṭai are also displayed at the Jaffna museum. They are made of Jaffna limestone.

Kantarōṭai yields varieties of local and foreign wares. The site is abundant with Megalithic ECBRW, other Black and Red Wares, Early Red Wares and Rouletted Ware. There was a specimen of glazed Rouletted Ware. In fact, at Kantarōṭai we were able to observe all the varieties of pottery found at the archaeological sites in the Peninsula. But the comparative heavy concentration of early wares listed above point out that the site was more ancient than medieval.

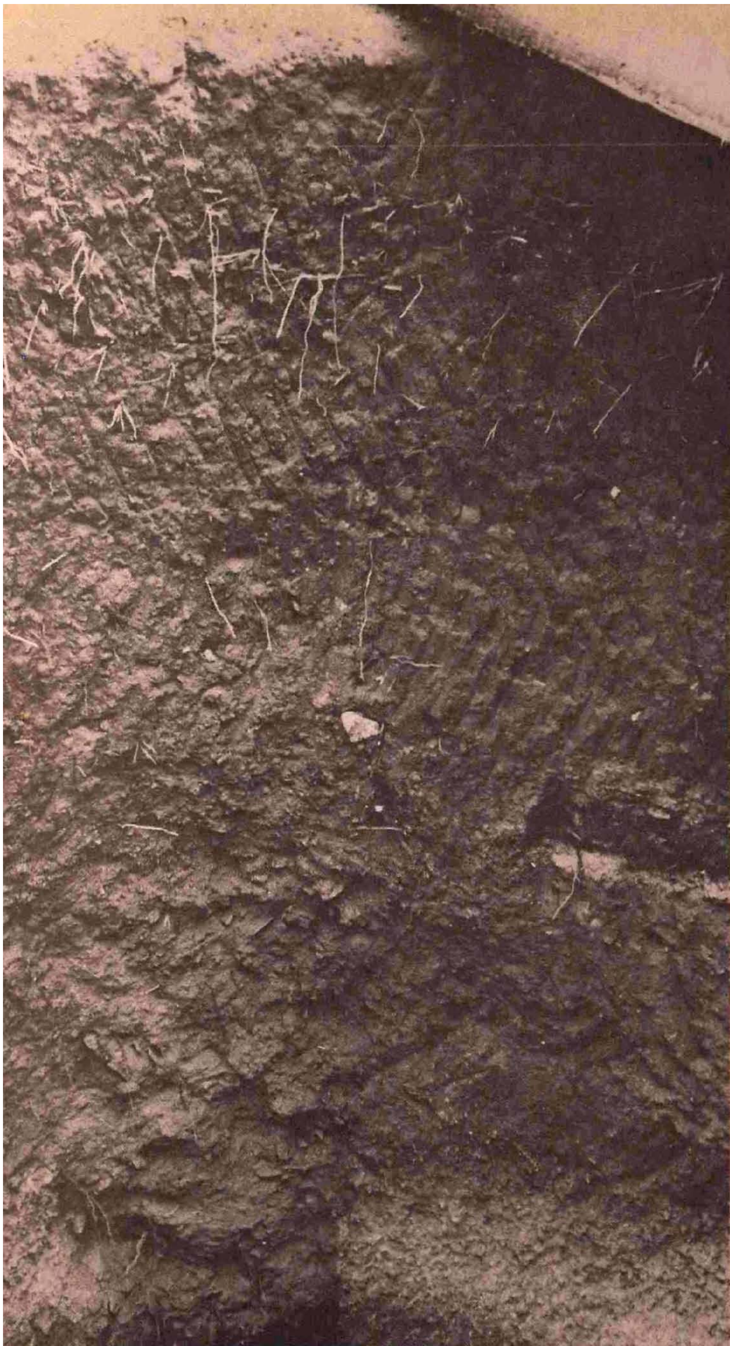
The site is heavily strewn with bricks and tiles, compared to any early archaeological site in Jaffna, which testifies how urbanized Kantarōṭai was.

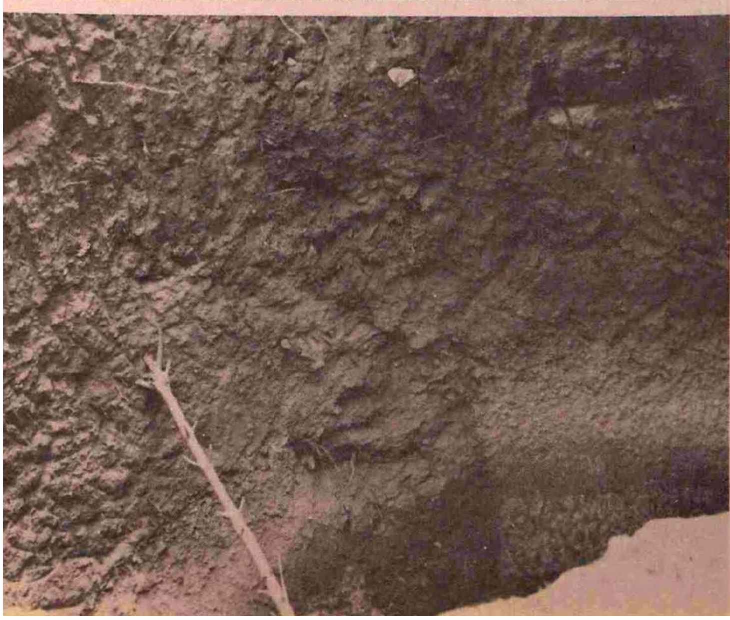
The other notable factor is the rich presence of precious finds and coins. Children pick up a number of them especially after a rainy season at Kantarōṭai. Fragments of bangles, various types of carnelian, paste, glass, shell and semi-precious stone beads are frequent finds. A large number of coins, beginning from Punch Mark types to Dutch period have been found at Kantaroṭai. Discovery of a hoard of 11-13 century coins also was reported to us. Regarding coins, the speciality of Kantarōṭai is the heavy presence of Lakshmi Plaque coins. Lakshmi Plaque coin is a rectangular sheet of copper. In the obverse a standing figure with prominent faminine features resembling a



Plate 50 *: The stupa-complex at Kantarōṭai. The structures seen in the photograph were reconstructed by the Sri Lanka. Department of Archaeology on the original bases. Several such foundations, belonging to different phases and overlapping each other are seen in the excavated trenches. Such a congested layout in a small area strongly implies the association of burial traditions, parallel to those of the Andra Buddhism. Perhaps, the layout concept of this stupa-complex can be described as a Buddhicised version of megalithism.*

Plate 51 *: Overlapping photographs of the section of a well, dug at Kantarōṭai. Note the presence of sherds, bricks, a limestone foundation and a pit dug into the stone layer almost touching the present watertable. The well is near the spot where the team from the Pennsylvania University excavated earlier.*





mother goddess is depicted. The reverse has a swastik cum anchor symbol. Significantly metal objects resembling this symbol have been found in the Megalithic burials in Tamil Nadu. The symbol appears as a graffito mark in the potsherds and has been found in the Tamil Brahmi inscriptions as well as Sri Lankan Brahmi inscriptions.

The Lakshmi Plaque is essentially a Sri Lankan coin and the largest number of them has been reported from Kantarōṭai. This type has been dated around the dawn of the Christian era. This is confirmed in our research as the coin was found in association with the burial Sk_2 at Āṉaikkōṭṭai, along with ECBRW and Rouletted ware.

Kantarōṭai is quite rich in Roman coins and even Roman seals have been reported. One such seal is with Prof.K.Indrapala.

A collection of small finds found at Kantarōṭai is now displayed at the Jaffna Museum. For many decades, Mr.Ponnampalam, a retired teacher of Skandavarōdaya College, Kantarōṭai, collected precious antiquities from the site in a larger number than the Jaffna museum collections. They were purchased by the then Govt. Agent of Jaffna, Mr.Vimal Amarasekara, and now we learn that they have been given to the University of Kelaniya.

It is a matter of concern that antiquity business is denuding the precious evidences at Kantarōṭai. Whenever a stranger visits the site, the children bring number of small finds for sale and this is being exploited by unscrupulous antiquity dealers.

During the survey we were fortunate enough to observe a well being dug in a spot near one of the Pennsylvania University trenches.

Cultural deposits were noticed from the surface to a depth of around 6 metres. Five layers were noticed from top to the watertable.

Layer 1 : Dark brown surface layer containing pot sherds and brick rubble.

Layer 2 : Light brown soil; thickly packed with sherds, fragments of tiles, bricks and stone rubbles.

Layer 3 : Grey loose earth containing ECBRW, Rouletted ware, other BRW, and Early Red Wares.

TRRW was not found in this layer. BRW and Red ware sherds were found with graffiti marks. A number of animal bones, some with sharp butcher's cut marks and shells were found. A square coin with elephant and punch mark symbols resembling the early Pandyan coins was found in the dug out earth. There is a possibility that this layer may have two or more occupational levels, but we could not confirm this under the circumstances. A large pit originating from this layer went down the virgin layers 4 and 5.

Layer 4 : White solidified lime gravel known as *makki*. This was non-implementiferous and about one foot thick. The pit of the layer 3 went through this layer.

Layer 5 : Light brown, heavily Krastic and porous limestone. The water table was at the bottom. The pit terminated at this layer above the water table.

The present research has nothing significantly new to add to the existing knowledge on Kantarōṭai. But when Kantarōṭai is put into the context of new knowledge on other early archaeological sites of Jaffna and analysed, it indeed provides a significant picture. It is with this intention, this report has been presented.

Soil :

The soil is grey loam in the paddy fields and in the Valukkiyāṟu bed. Towards Cuṉṉākam it becomes red loam. In the site, the top layers are brownish, perhaps because of the disintegrated bricks and tiles.

Fresh-water resources :

The water resource facilities are one of the best available in the Peninsula. The site is along the bed of Valukkiyāṟu,[30] the biggest flood outlet in the Peninsula. A number of ponds and tanks are located at Kantarōṭai and in the neighbouring areas. The Kantarōṭai Kuḷam alone is 39.6 acres extent, and has a capacity of 75.24 c.ft/acre. Compared to the other ponds of the Peninsula, this is much bigger than many of them and ranks second in the Peninsula in its capacity next to the Maṭṭuvil tank. Besides, there are other ponds like Pinakkai, Alukkai, and Uṭuvil around Kantarōṭai — all of which could be considered large in the context of the Jaffna peninsula.[31] The water available in the wells is perennial and saline free.

Coastal prospects :

Camputuṟai[32] deep sea entrepot, is barely within 10 km distance facing the Palk Strait and is situated at the entrance of the Jaffna lagoon. This is the nearest point in Jaffna to reach the Indian sub-continent through Kōṭikkarai (Point Calimere). Ānaikkōṭṭai,[33] the lagoon port, is also at an equal distance.

Natural vegetation :

Palmyra and thick growth of scrub were noticed in the mounds bordering the paddy fields.

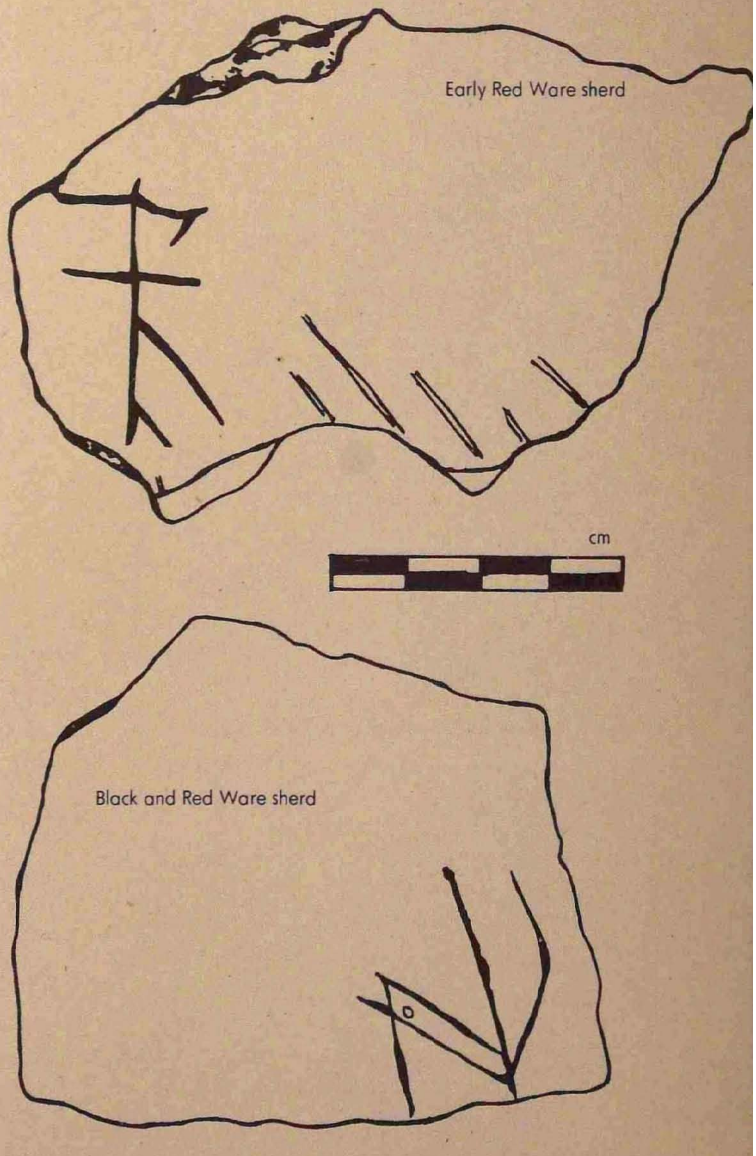


Plate 52 : ***Sherds with graffiti marks, from the dug-out earth of the well.***

Present cultivation :

Paddy in the rainy season. Some of the potential paddy-fields of the Peninsula are in the vicinity. Leguminous plants, and vegetables are cultivated in the dry season between January and April.

Grazing-lands :

Large stretches are available as the surrounding areas are the most extensive paddy-field belt of the Peninsula.

Availability of building material :

Coral could have been brought from the coasts, and limestone from the nearby areas. Local varieties of bricks, tiles, and pottery could have been produced out of the flood outlet and pond silt.

Disposition :

The central place status of the location is still retained to an extant, as nearby Cuṉṉākam is one of the biggest market towns of the Peninsula.

Remarks :

The emergence and decline of Kantarōṭai provide valuable clues to the political, social, economic and cultural history of Jaffna.

Kantarōṭai was urbanized parallel to Anuradhapura and Mahagama at the end of Protohistoric times on the basis of the Megalithic culture. In Jaffna, this seems to be the only early urbanized central place having satellite settlements and entrepots throughout the Peninsula. This indicates that Jaffna was a political unit of its own in the Island of Sri Lanka, in the early stages, before the hegemony of Anuradhapura. Kantarōṭai was probably the urbanized capital of an early principality that existed in the Peninsula.[34]

Because of the geographical location, under the then prevailing conditions, Jaffna was able to participate actively in the trans-oceanic Roman trade and in the trade between India and Sri Lanka. Trade was the basis of the development of socio-economic structure in Jaffna. This interpretation is strengthened by the fact that Jaffna and Kantarōṭai declined along with the decline of Roman trade around 5th century A.D. The subsequent Arab-Chinese trade had its focus at Māntai, 100 km south of Jaffna in the Maṉṉār district of Sri Lanka.

Kantarōṭai is a site of importance in South Asian perspectives. But, charged by ethnic passions, this site of rich cultural heritage is neglected, misinterpreted, and allowed to be disturbed by the State and by the people of Jaffna, both for their own reasons.

Kantarōṭai also provides clues to the prevalence of Jaffna Buddhism, which overlapped with Megalithic beliefs and declined with the emergence of the Kingdom of Jaffna. The Kantarōṭai evidences points out that Jaffna had a localised style of Buddhist architecture.[35]

List of pottery types :

1.1/I /M
3.1/VII/M
3.3/V /M
3.4/I /M
4.1/? /F
4.2/? /F
4.3/? /F
4.4/? /F
4.6/I /F
4.8/V /F
4.9/V /F

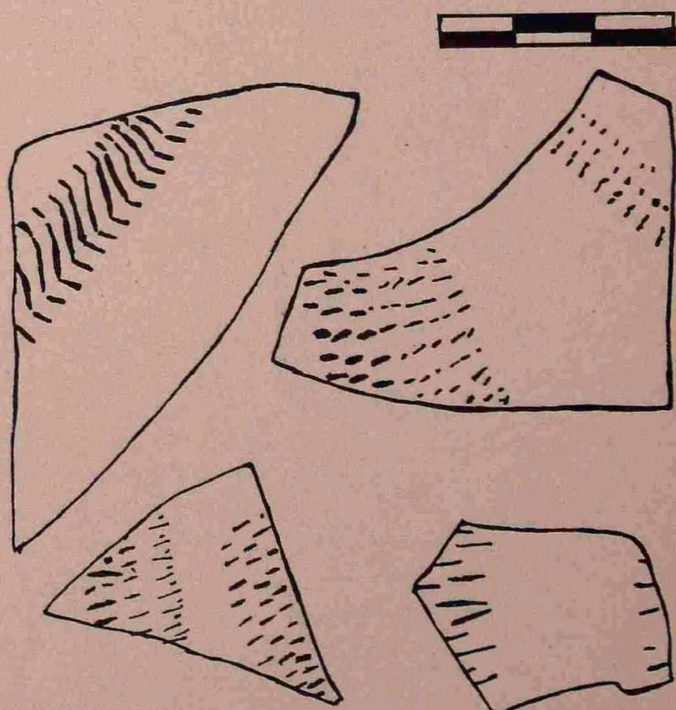


Plate 53 : *Rouletted Ware sherds from the disturbed earth near the well site.*

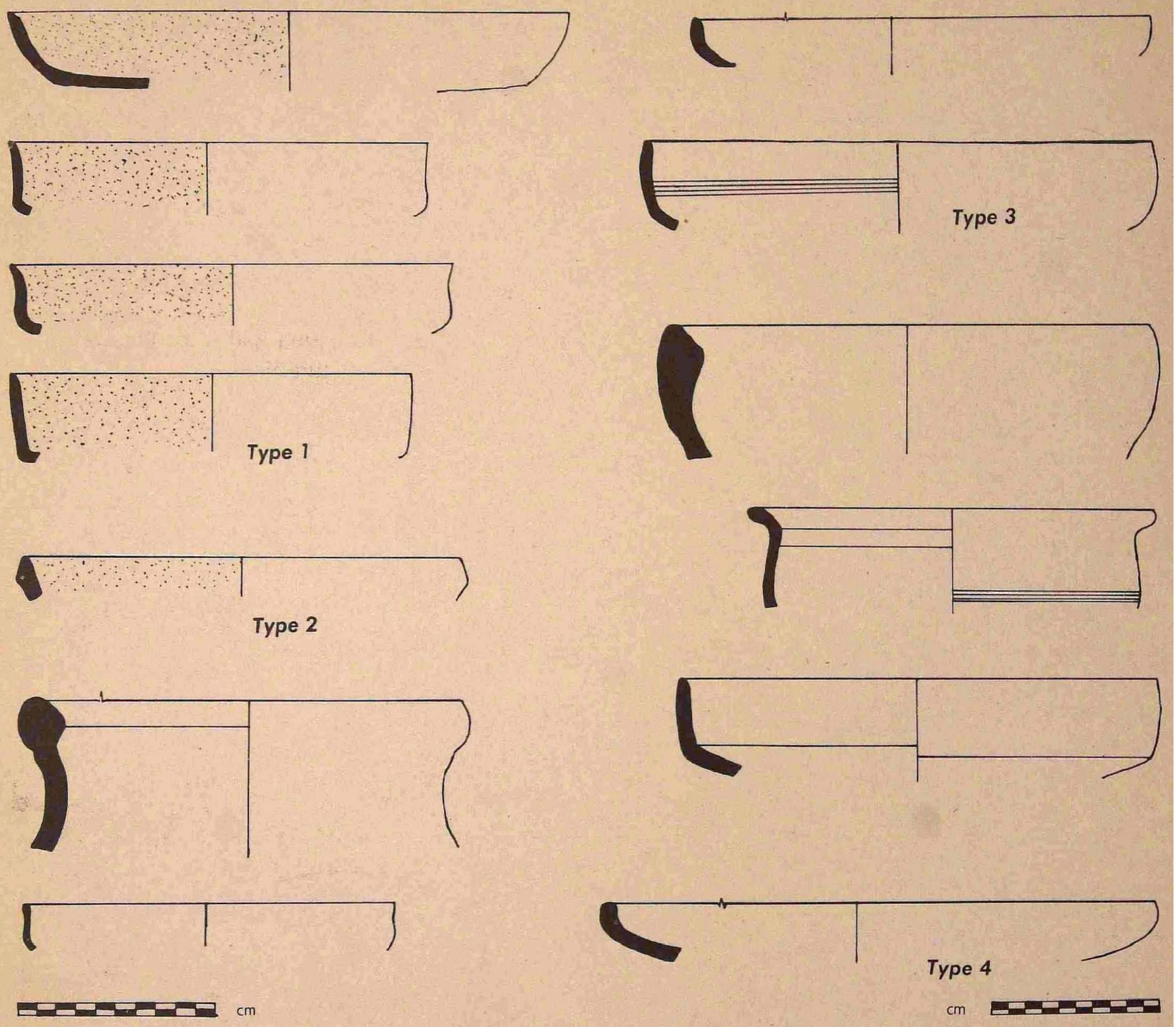


Plate 54 : *Pottery types — obtained from the dug-out earth of the well, Kantarōṭai.*

Ā<u>n</u>aikkōṭṭai (Exploration)

Plate 55 : *Artifact-bearing mounds protrude amidst the paddy fields. Landscape of the Ā<u>n</u>aikkōṭṭai archaeological site, seen from the Megalithic burial mound.*



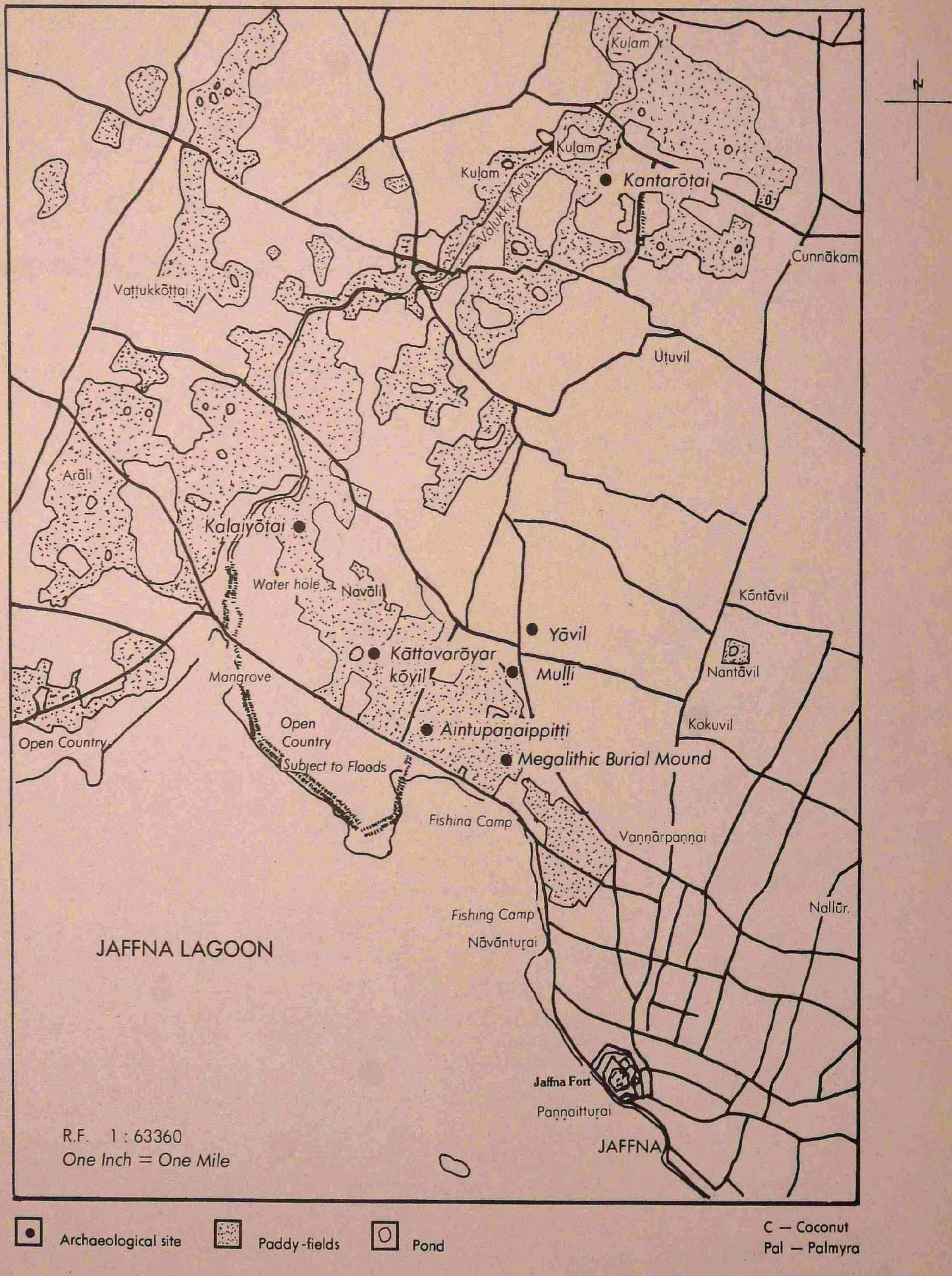


Plate 56 : *Āṉaikkōṭṭai, Kaḷaiyōṭai and Kantarōṭai — site map.*

Latitude :

9° 41′ 40″ N - Megalithic burial mound or mound 1
9° 41′ 35″ N — Kaṇṇakai Ammaṉ Temple mounds
9° 41′ 50″ N — Aiṅtu Paṉai Piṭṭi
9° 42′ 10″ N — Muḷḷi & Dutch Road
9° 42′ 20″ N — Yāvil
9° 43′ 00″ N — Kāttavarāyaṉ Temple

Longitude :

79° 59′ 40″ E — Megalithic burial mound or mound 1
79° 59′ 35″ E — Kaṇṇakai Ammaṉ Temple mounds
79° 59′ 05″ E — Aiṅtu Paṉai Piṭṭi
79° 59′ 35″ E — Muḷḷi & Dutch Road
79° 59′ 50″ E — Yāvil
79° 58′ 30″ E — Kāttavarāyaṉ Tample

One inch sheet no :

Jaffna A^A 21, 22, A_1, 2

Mosaic sheet no :

A2

Approach :

All the sites except Yāvil and Kāttavarāyaṉ temple are located within the area bordered by the following four roads; Vaṭṭukkōṭṭai road; Māṭṭo-luṅkai road; Navāli road and Karaiyāmpiṭṭi road.

The Megalithic burial mound can be approached by the Karaiyāmpiṭṭi road that connects Kākkai-tīvu Junction and the Jaffna-Māṉipāi road. A part of this mound presently serves as a Christian burial ground and is near the Karaiyāmpiṭṭi Hindu crematorium.

The Kaṇṇakai Ammaṉ temple mounds can be reached by walking north from the temple which lies alongside the Jaffna-Vaṭṭukkōṭṭai road.

The Aintu Paṉai Piṭṭi site, by the side of the Māttolunkai road, has now become paddy-fields.

The Muḷḷi site is located near the Dutch road Karaippirāṉ Piḷḷaiyār temple on the lands adjoining the Dutch road.



Plate 57 : *Āṉaikkōṭṭai — a view of the Megalithic burial mound from north. This is the undisturbed portion of the mound.*



Plate 58 : *Scooped-out area of the Megalithic burial mound at Āṉaikkōṭṭai. A view from south.*

The Yāvil site is near the Āṉaikkōṭṭai Junction behind the present Māṉipāi Branch Office of the Jaffna District Development Council.

The Kāttavarāyar temple is at the periphery of the paddy-fields. The road that deviates from the Vattukkōttai road near the Kalluṇṭāi Vairavar temple leads to this spot.

Description :

The archaeological potentiality of Āṉaikkōṭṭai was discovered when we conducted a planned exploration in this area, with an anticipation of finding archaeological sites along the coasts of the Jaffna lagoon.

The artifactual distribution at Āṉaikkōṭṭai covers an area of more than two square kilometres. It is a complex of archaeological sites ranging over several hundred years in time. This exploration report covers about six sites located in this area.

The Megalithic burial mound :

This occupies an area of around two acres, in the paddy-field stretch of Āṉaikkōṭṭai. Half of the mound is undisturbed. This is covered by natural vegetation and by coconut trees. Part of the remaining half became recently a Christian burial ground and potsherds were found scattered in the earth dug out for the burial pits.

The rest of the mound was being scooped out to fill a low-lying land for the Nāvānturai housing scheme when we made the discovery of this site. It was after a heavy shower in November 1980, and we found an intensive distribution of pottery in the dug-out areas.

A partially damaged large urn, several bones and a vast number of Early Carinated Black and Red Ware sherds were enough clues to the Megalithic potentiality of this site. As a list of the surface finds follows this report, only certain important features of the finds are discussed here.

The urn was found damanged and the rim was missing. When we rescued the remaining portions, conch-shells, bones, a crab-shell and ECBRW sherds were found inside. Near the urn a copper rod, probably a *kohl* stick that usually occurs in urn burials,[36] was found. One corner of the dug-out area was not very much disturbed and here we noticed a heap of grooved tiles. Two boulders, obviously not of local origin, were found nearby. A Rouletted Ware sherd (Type 4.9) collected during this survey, had two evolved Brahmi scripts stamped on it. The other surface finds included a number of iron slags, tools, oyster shells, bones, polished and unpolished vertibra bones, fish bones, rubbing stones, etc.

Kaṇṇakai Ammaṉ Temple mounds :

Kaṇṇakai Ammaṉ temple is a non-Brahmanic folk shrine alongside the Vaṭṭukkōṭṭai Road. There are three pottery bearing mounds north of the temple. Two of them are partially disturbed and one is intact. Concentration of Thick Rim Red Ware sherds were noticed in these mounds. Rouletted Ware sherds were also collected from the disturbed section of one of these mounds.

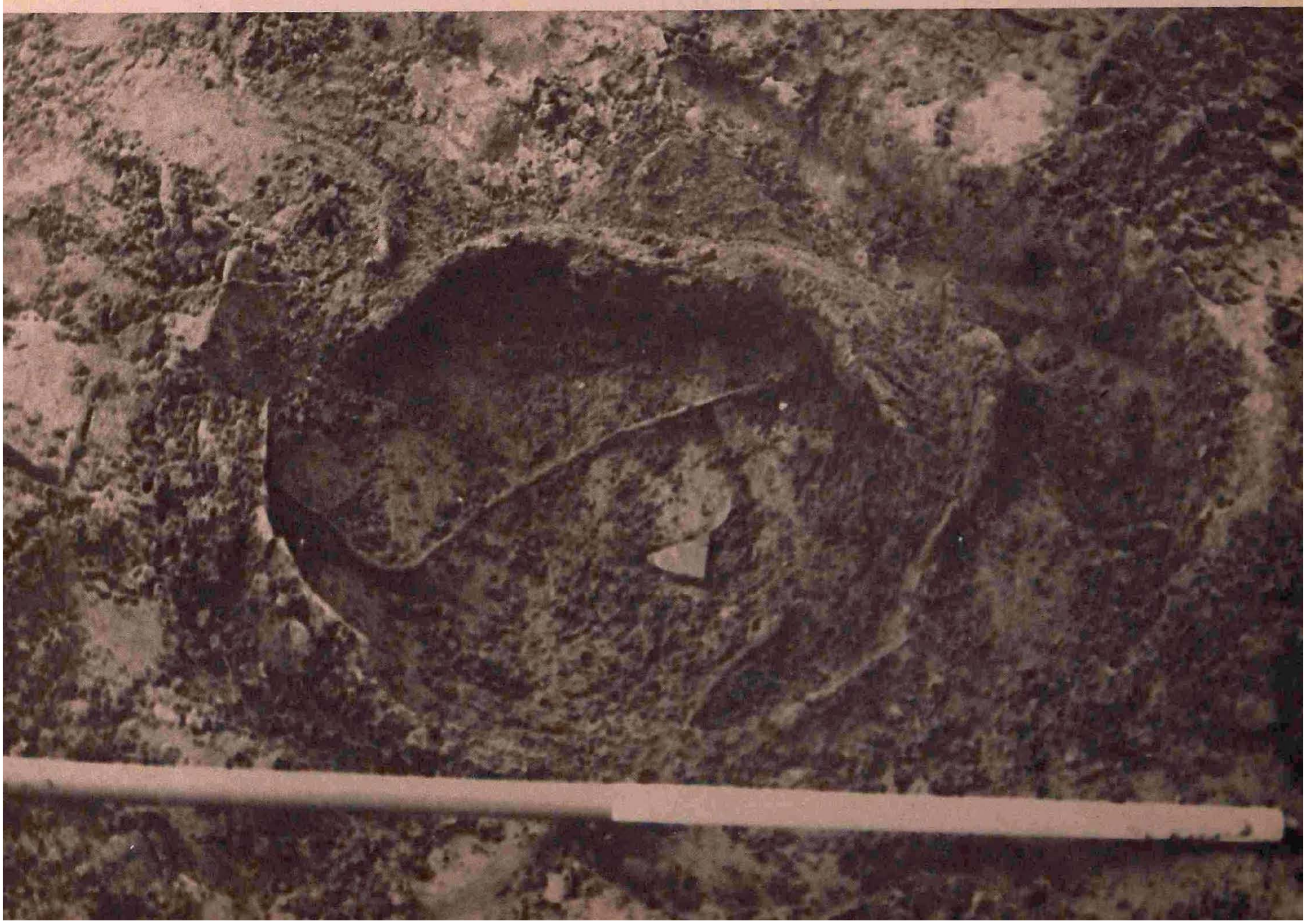
Aintu Paṉai Piṭṭi :

The spot presumably gained the name because there was a mound with five palmyras. But now the entire mound has vanished because of earth scoopers. However, at the time of the survey the lower layers of the mound were intact. The spot yielded a variety of pottery, mainly of Thick Rim Red Ware, its associated types and iron slags.

Muḷḷi-Dutch Road :

The Muḷḷi site is in the periphery of the paddy fields of Āṉaikkōṭṭai. Potsherd distribution was

***Plate 59** : An urn, found in a disturbed spot of the Megalithic burial mound, Āṉaikkōṭṭai.*



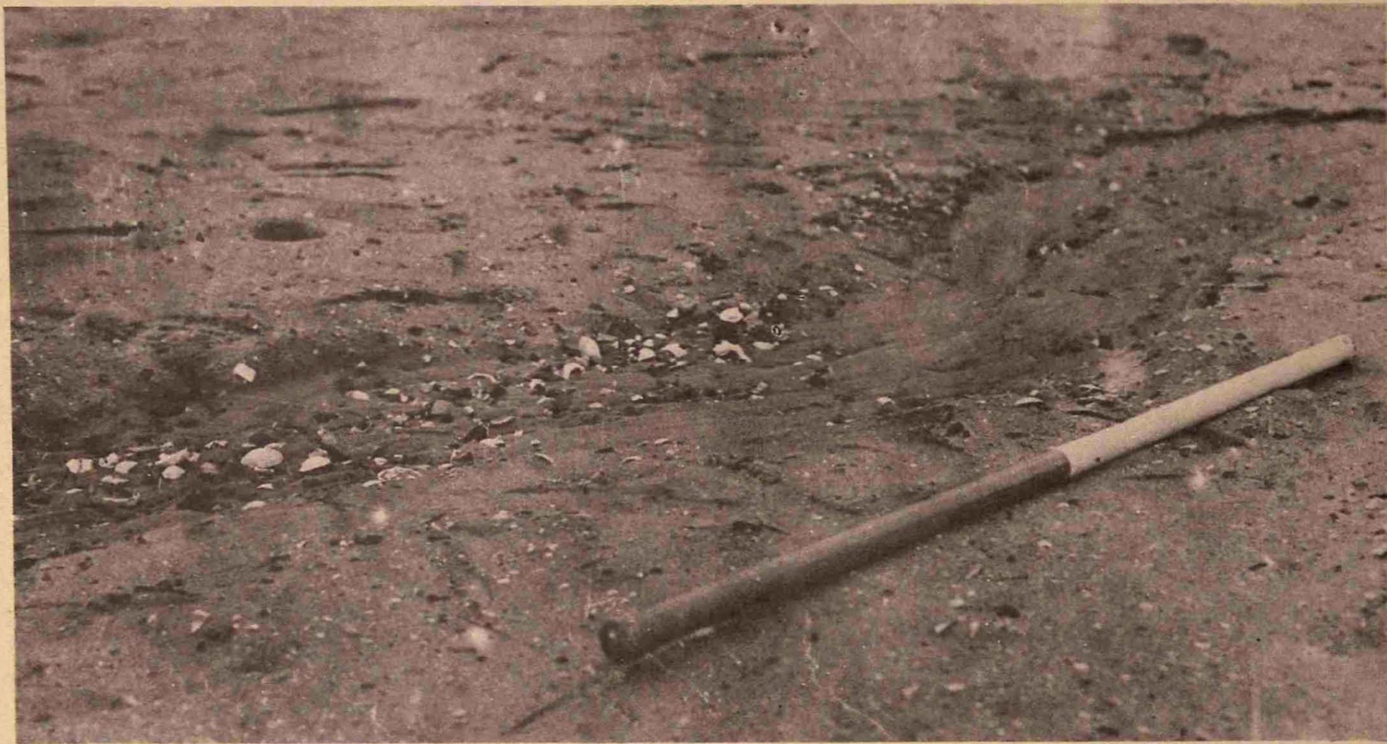


Plate 60 : *Strewn pottery in the rain-gullies. Megalithic burial mound, Āṉaikkōṭṭai.*

noticed at two places in this area. One was near the Karaippirāṉ Piḷḷaiyār Kōyil mound, and in some house premises between the temple and the Navāli road. The other spot was in the sandy area north-west of this location. The extent of this stie, including both the spots, is around 10 acres.

The Piḷḷaiyār kōyil mound and the neighbouring house premises were found nearly packed with potsherds. Possibly it was a kiln site. The sherds are mainly of the Thick Ṛim Red Ware. Historic Black and Red Ware sherds also were obtained at lower levels. Chinese ware sherds and a few terracotta objects were obtained near the Pillaiyār temple.

Yāvil :

Mounds were observed adjoining the Yāvil pond, and near the folk temple situated on the bund. Sherds were obtained here and in the flood outlet leading to the pond. The sherds were of Thick Rim Red Ware.

Kāttavarāyar Temple :

The temple is located at the northern periphery of the Āṉaikkōṭṭai paddy field stretch and it is on the Āṉaikkōṭṭai-Navāli border. This is a famous folk temple in this area known for the annual folk drama of Kāttavarāyar. There are huge mounds nearby and, many limestone polished slabs were found scattered in the area. A few socket stones also were noticed. The finds point to structural remains here, which can be confirmed only by an excavation.



Plate 61 : *Limestone slabs, remains of an earlier structure, were made use to construct a folk shrine at Kāttavarāyar Kōyil, Navāli.*



Plate 62 : *The flood-outlet 'Cippittaṟai Vāikkāl' in the month of November.*

Soil :

The soil is grey loam or, alkali and saline. The soil here is embedded with marine life remains like coral, oyster shells etc. An area near this paddy-field stretch is known as Cippi Taṟai (land of oyster shells). Local farmers heaped these marine life remains as mounds. Not all the mounds in the area are archaeological. Many of them seem to be man-made; heaped while lowering the adjoining paddy-fields. There are a few mounds of Red loam earth, in the fields north of Māttolunkai road. Other mounds in the area of Cakkiṟālai-Navāli, still yield good clay for bricks and pottery. The soil near the Muḷḷi site is yellow loam, and sandy.

Water resources and drainage :

This is an important aspect that determined the growth of this location as an important settlement area for several centuries. The whole *taravai* plains of Āṉaikkōṭṭai, are virtually submerged during the returning monsoon by the flood waters that come from the central region of the Peninsula. A major flood outlet of the Peninsula, Cippitaṟai-vaikāl, originates at Urumpirāi and, passing through Kōṇṭāvil, Nantāvil, Kokuvil and Vaṇṇārpaṇṇai, it floods the Āṉaikkōṭṭai fields. This drainage pattern and its agricultural potentialities would have been conducive to early settlements. The groundwater in this area is quite good, perennial and available at shallow depth.

Plate 63 : *The mound adjoining the Karaippirāṉ Piḷḷaiyār temple at Muḷḷi, Āṉaikkōṭṭai. Potsherds and terraccotta objects were found in the mound and in the nearby coconut grove. The temple gained its name by its location on the banks of a pond, now abandoned.*

Plate 64 : *Densely packed sherds mainly of TRRW, found in a coconut grove at Muḷḷi, Āṉaikkōṭṭai.*





Coastal prospects :

The coastal prospects of Āṉaikkōṭṭai are multi-faceted. The Jaffna lagoon forms a bay at Āṉaikkōṭṭai which is ideal for anchorage for the small ancient vessels. The innermost point of the bay, is adjacent to the Megalithic mound of Āṉaikkōṭṭai. At present there is a fishing jetty situated in this spot.

Besides its navigational prospects, the Lagoon must have played a vital role in the subsistence pattern of the settlement by providing a considerable share of their staple food. Presently, this part of the Lagoon and the Āṉaikkōṭṭai fishing centre cater to the marine food needs of a major segment of the urban and suburban population of Jaffna city.

Natural vegetation :

The natural vegetation found here is typical of the paddy field mounds of Jaffna, comprising a few big trees and scrub. This natural vegetation faces the danger of extinction as the mounds are disturbed for earth.

Along the coast and near the Vaḻukkiyāṟu delta, the natural vegetation is mangrove. During the rains this area is flooded and becomes a marsh land. These conditions attract thousands of migrating birds who make it as a niche for them until February. The possibility of these birds being used as food in early times can be ascertained only after an analysis of the bone remains obtained during the Āṉaikkōṭṭai excavation.

Grazing-land :

The availability of vast grazing-lands is another important dimension of the location, suitable for early settlements. The entire paddy-field stretch and the lagoon coast *taravai* become grazing-land in summer.

Present cultivation :

This is one of the important stretches of paddy fields in the Peninsula. Sesame, pulses and ragi are cultivated after harvesting paddy.



***Plate 65** : A view of the Jaffna lagoon from the Megalithic burial mound, Aṉaikkoṭṭai.*



Plate 66 : *Paddy-fields at Āṉaikkōṭṭai. The Kaṇṇakai Ammaṉ temple is located in the grove.*

Disposition :

As discussed under the column of coastal prospects, this location gains its importance by its disposition along the coast of the Jaffna lagoon.

Legends :

Surprisingly there are no legends about this place which was an important location for settlements for several centuries.

Remarks :

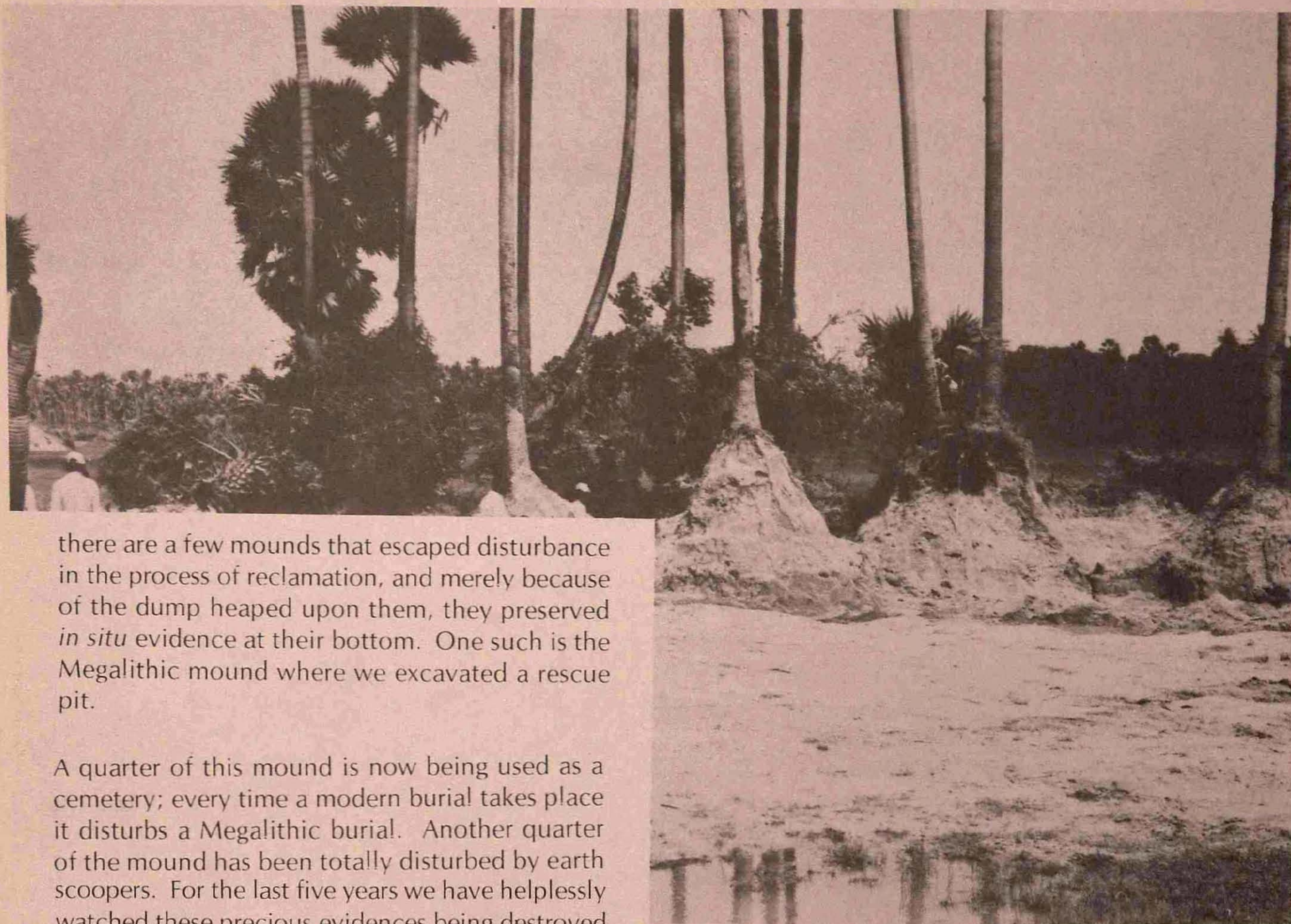
The early human activities at Āṉaikkōṭṭai area, seem to have had a span of more than one thousand years. Tentatively on the strength of the pottery and other artifacts, the site complex could be dated from c.300 B.C., to the end of the first millennium A.D. The Karaiyāmpiṭṭi Megalithic mound itself contains artifacts datable to a range of 500 years.[37]

It seems, after the megalithic phase, human activities at Āṉaikkōṭṭai shifted to the hinterland of the Karaiyāmpiṭṭi mound. However, we do not know whether the Karaiyāmpiṭṭi mound was used only for burials, and the settlement proper was in the hinterland where now we find comparatively later pottery at the surface level.

This area, Muḷḷi-Karaipirāṉ temple premises, situated 0.5 km north from the Megalithic mound, is worth investigating. Probably this may yield interesting clues regarding the Megalithic settlement proper and the sequence that has succeeded the Megalithic phase at Āṉaikkōṭṭai.

Preservation of the Āṉaikkōṭṭai mounds :

At Āṉaikkōṭṭai, the artifacts are distributed in an area of nearly 2 sq. km. The site complex was seemingly disturbed heavily during the reclamation of the area for cultivation in the recent past. In the process of lowering the level of the lands, implementiferous earth was dumped as mounds scattered, in the paddy-fields. Some of the mounds thus contain only disturbed artifacts. However,



there are a few mounds that escaped disturbance in the process of reclamation, and merely because of the dump heaped upon them, they preserved *in situ* evidence at their bottom. One such is the Megalithic mound where we excavated a rescue pit.

A quarter of this mound is now being used as a cemetery; every time a modern burial takes place it disturbs a Megalithic burial. Another quarter of the mound has been totally disturbed by earth scoopers. For the last five years we have helplessly watched these precious evidences being destroyed for ever. We are sure, some future archaeologists will be puzzled to see the Megalithic artifacts at Nāvānturai reclamation, and at Kaṉṉāpuram housing colony by-lanes, after the Āṉaikkōṭṭai earth is dumped here.

To add to the misery, the District Development Council of Jaffna, has decided to construct an International sports stadium at the very site of Āṉaikkōṭṭai. Nearly 30 acres of land and several mounds including the remaining undisturbed half of the Megalithic mound have been acquired for this purpose.

It is indeed painful for any archaeologist and for anyone who cares to understand the cultural heritage, to be a witness to such vandalism. We hope timely action will be taken to preserve these mounds. Posterity will be ever thankful to those who come forward to preserve these precious evidences of the earliest phase of human life in the Peninsula.

Plate 67 : *The extent of damage to the Megalithic burial mound, by the scooping of earth, can be seen in the pedestals on which the palmyras stand.*



Plate 68 : *A mound, adjacent to the Megalithic burial mound, almost flattened by the earth-scoopers.*

Megalithic burial mound

List of pottery types

1.1/I /M
1.1/I /C
1.1/II /M
1.1/II /C
1.2/? /M
2.1/V /C
2.1/? /M
2.1/III/M
3.1/III/M
3.2/III/M
3.2/III/M/IC
3.4/I /C/Pd
4.1/? /F
4.5/? /F
4.8/II /F
4.9/II /F
4.9/II /F/Pn
5.1/VII/M/Pd
5.2/V /M
9.5/IX /M

Mulli

List of pottery types

2.2/? /M/Pd
3.2/I /M/IC/Pd
5.1/VII/M/Pd
5.1/VII/C/Pd
5.2/VI /M
5.2/VI /M/Pd

List of other finds

1. Terracotta pipes
2. Fragments of Terracotta figurines

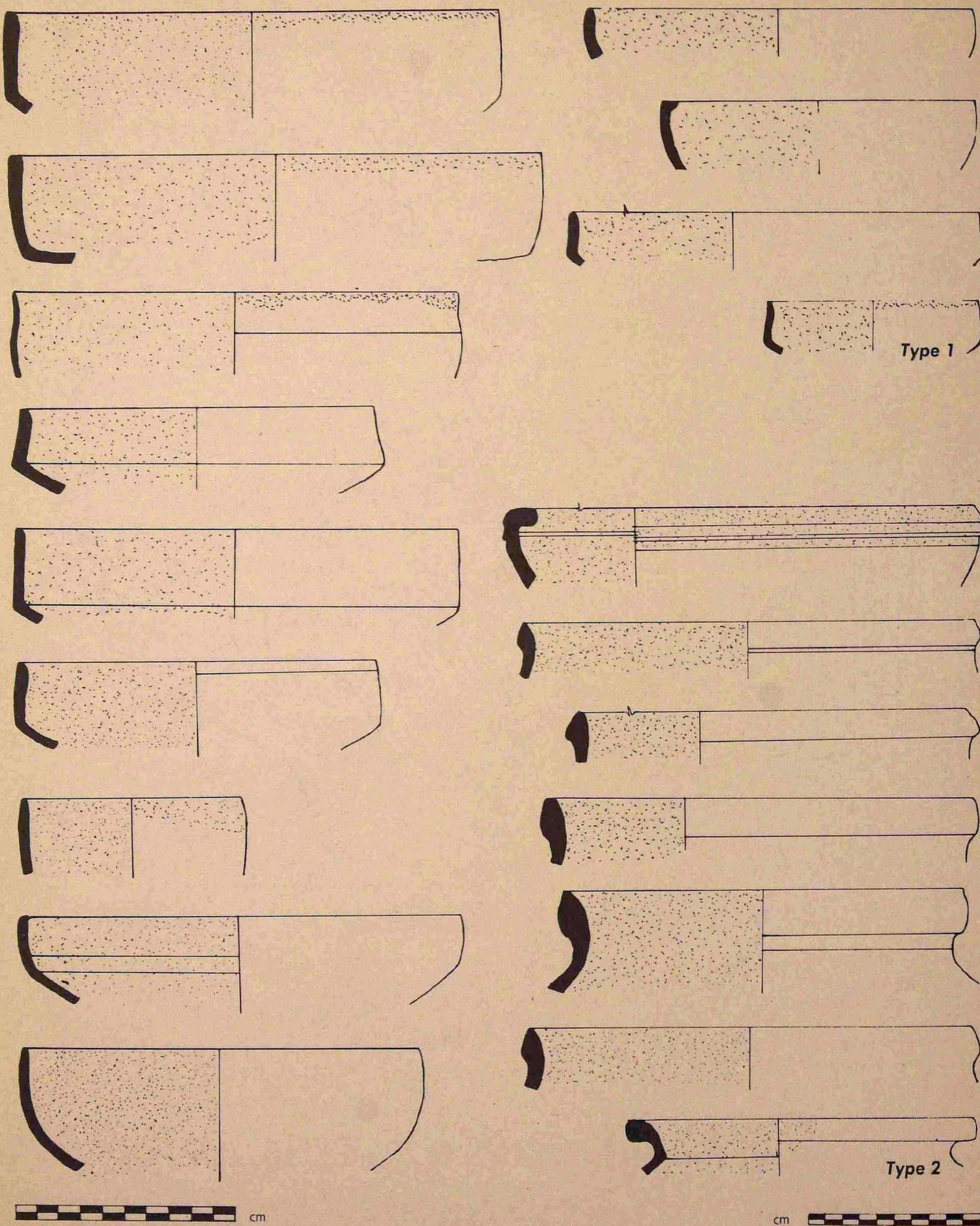


Plate 69 : *Pottery types — Megalithic burial mound, Āṉaikkōṭṭai. (Surface collection in the disturbed portion).*

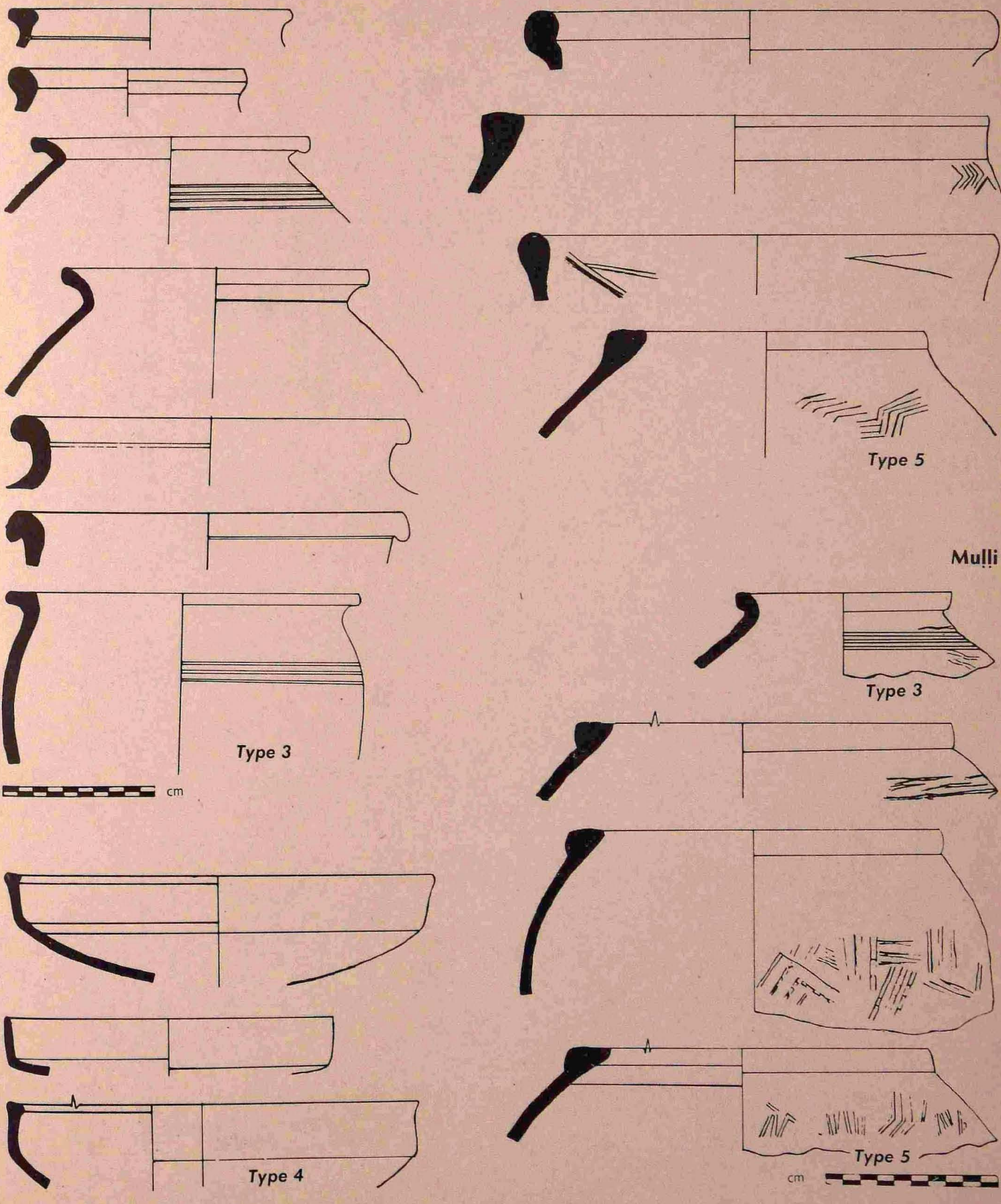


Plate 70 : *Pottery types — Megalithic burial mound and Muḷḷi, Āṉaikkōṭṭai. (Surface collection).*

Plate 71 : *Metal objects — Megalithic burial mound, A̱ṉaikkōṭṭai. (Surface collection).*

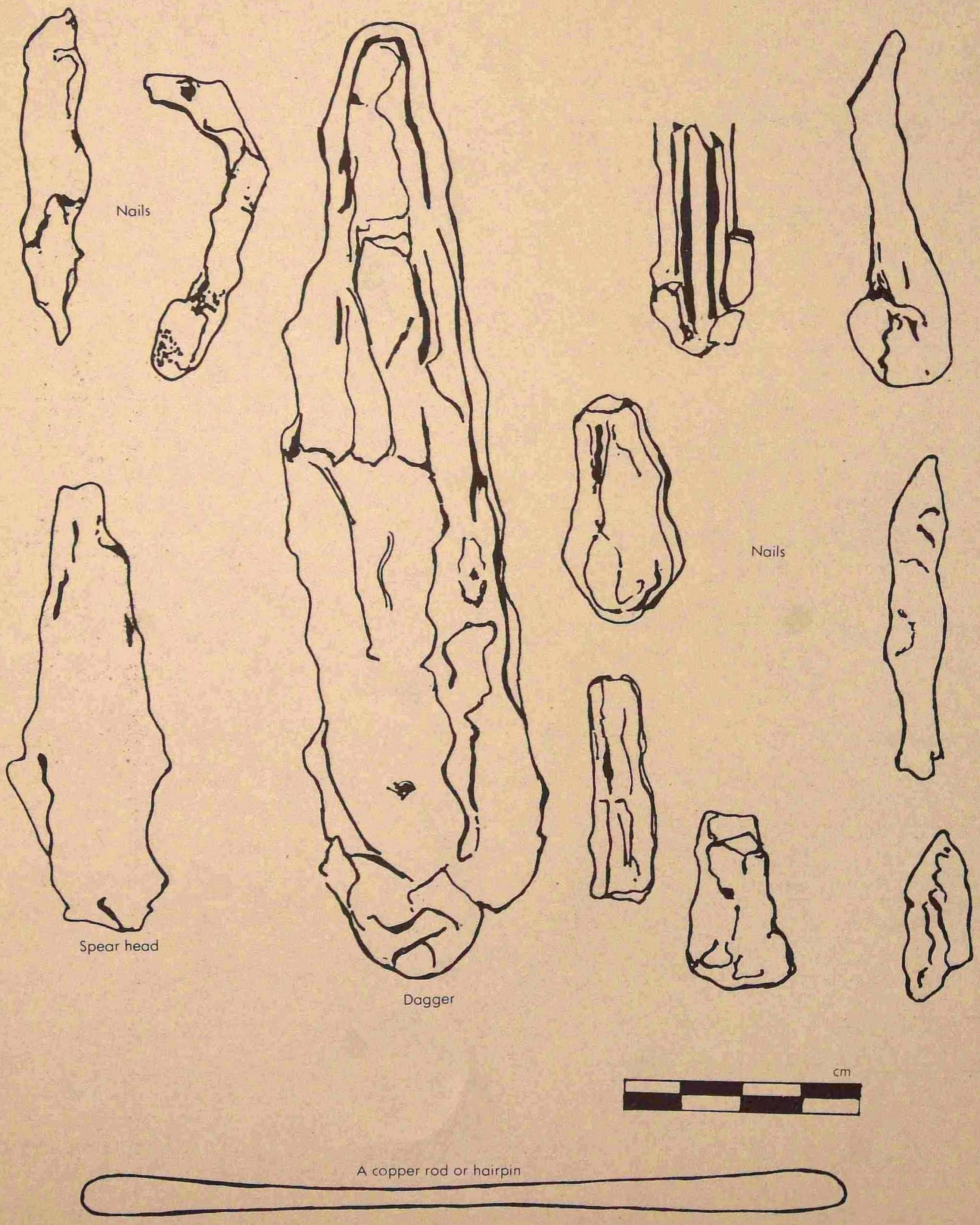


Plate 72 : *Pestle stones — Megalithic burial mound, Āṉaikkōṭṭai. (Surface collection).*

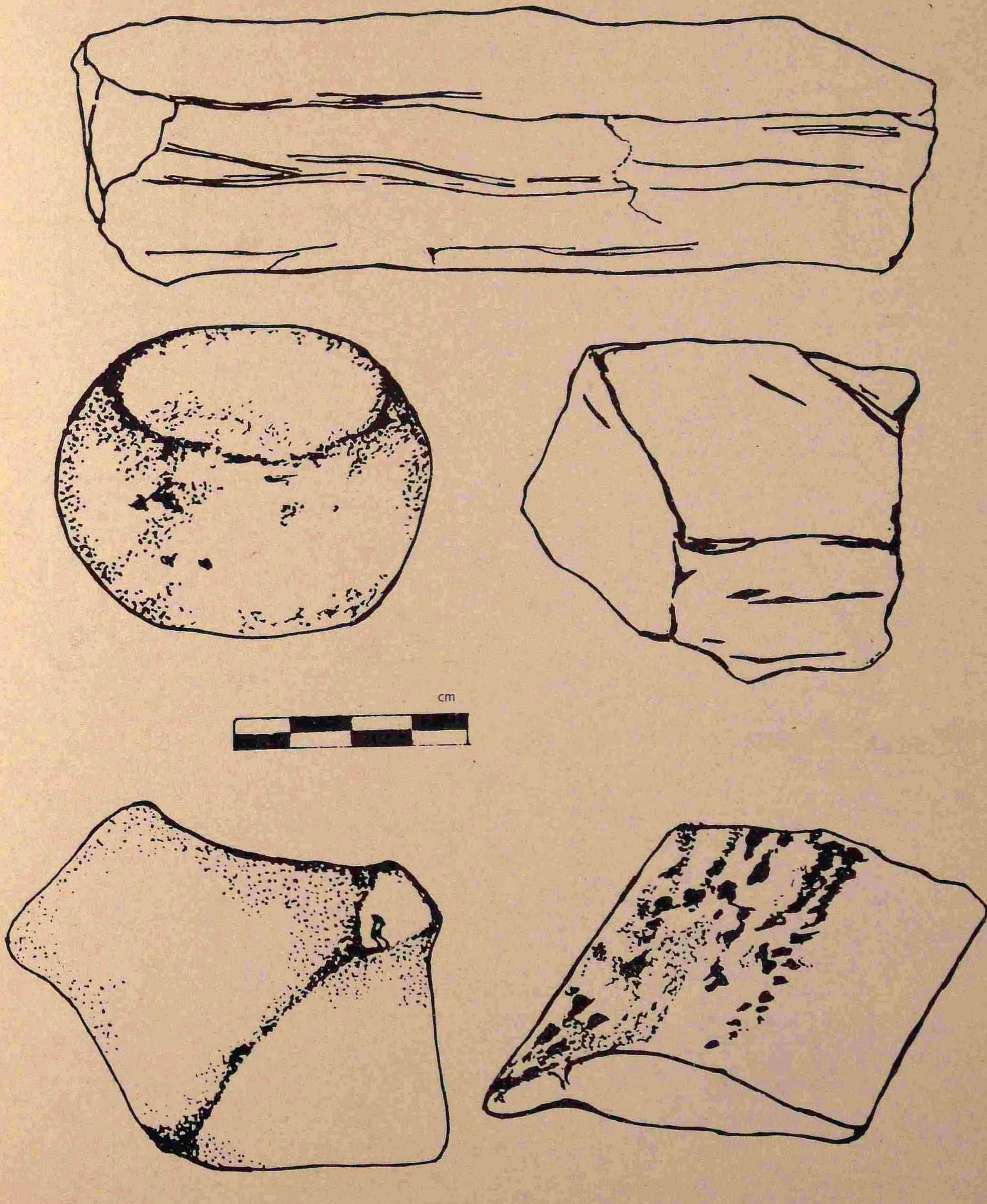
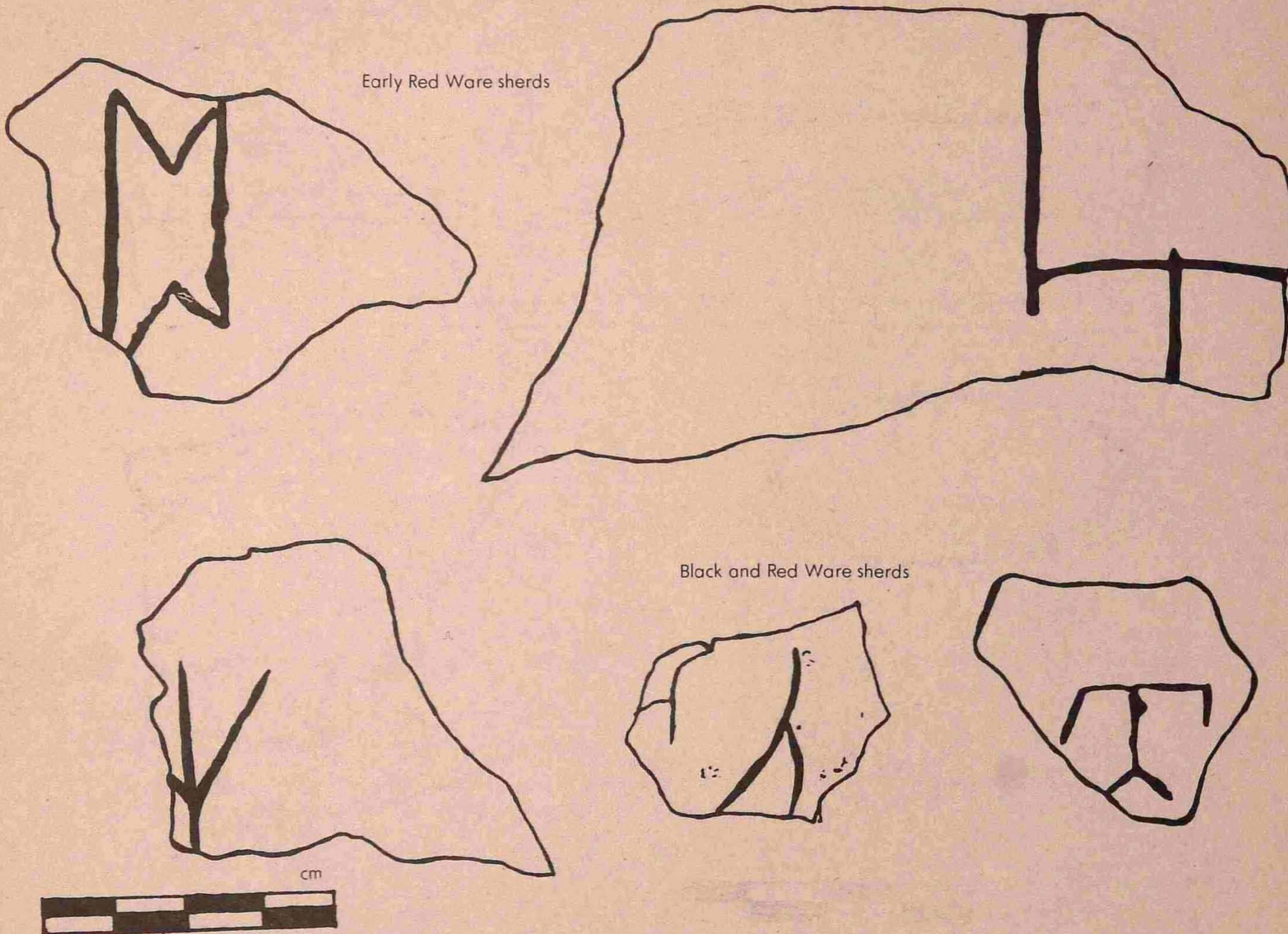
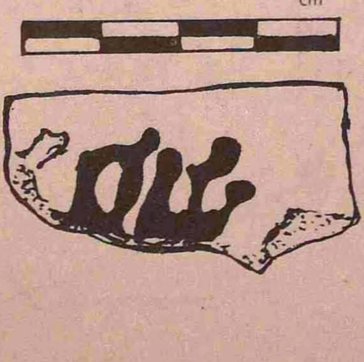


Plate 73 : *Graffiti marks and stamped letters on potsherds — Megalithic burial mound, Āṉaikkōṭṭai. (Surface collection).*





A Rouletted Ware rim sherd on which two evolved Brahmi letters were found stamped. The fragmentary legend can be read as 'bi', 'yi'.

Kaḷaiyōṭai — Navāli

Latitude :

9° 43′ 00″ N

Longitude :

79° 59′ 20″ E

One inch sheet no :

Jaffna sheet AA 21, 22, A1, 2

Mosaic sheet no :

A2

Approach :

The site is near the Va̲ḻukkiyāṟu delta situated in the paddy fields and lies between Jaffna-Vaṭṭukkōṭṭai and Jaffna-Navāli roads. It is within walking distance behind the Kaḷaiyōṭai Kaṇṇakai Amma̲n temple.

Description :

As in the case of the Āṉaikkōṭṭai site, it was those mounds protruding in the middle of the paddy–fields, which preserved the remnants of the site. The site is now considerably disturbed by successive ploughing. The potsherd distribution was noticed in an area of 10-15 acres of land. At present there are only two mounds in the spot with artifacts *in situ*. A folk temple is found in one of these mounds.

Soil :

As the site is situated in the Va̲ḻukkiyāṟu basin near its delta, the soil is alkali and saline.

Fresh–water resources :

The site marks the boundary of the fresh–water belt in the Va̲ḻukkiyāṟu basin. The wells of the eastern side of the site yield perennial, fresh drinking–water. The water becomes saline in the wells towards the delta. One significant aspect in this area is the presence of natural wells formed by the collapse of the limestone bed rock. One such well is found near the site and another, a big one, is found about 1.5 km north of the site. During the rains the entire stretch is submerged by rain–water brought by Valukkiyāṟu, the main flood outlet of the peninsula.

Distance from the lagoon :

The site is about 1.5 km from the Jaffna lagoon into which Va̲ḻukkiyāṟu flows during the rainly season. The delta is marsh land with mangrove. At present the nearest jetty is either Arāly (5 km) or Āṉaikkōṭṭai (5 km).

Natural vegetation :

Palmyra and scrub. A noticeable aspect is the variety of flora available in the mounds. They are fine examples of the natural vegetation of the Peninsula, which nowadays is rapidly disappearing due to human disturbance.

Grazing-land :

The paddy–fields are used as grazing-land after the harvest.

Present cultivation :

Paddy is cultivated once a year. This Va̲ḻukkiyāṟu stretch is the most important and extensive paddy field strip of the Peninsula. However, paddy is not cultivated commercially. It is cultivated for domestic consumption only, as people still prefer the local paddy varieties nostalgically for their taste, though they are long duration strains.

Availability of building material :

Clay from paddy-fields.

Disposition :

This could have been a site linking Āṉaikkōṭṭai with Kantarōṭai.

Remarks :

The site was first reported by Dr. S.K. Sitrampalam of the University of Jaffna.[38] The pottery available on the surface of this site is not as old as the early pottery of Kantarōṭai or Āṉaikkōṭṭai. The available pottery and other artifacts here date the site only to the early centuries of the Christian era.

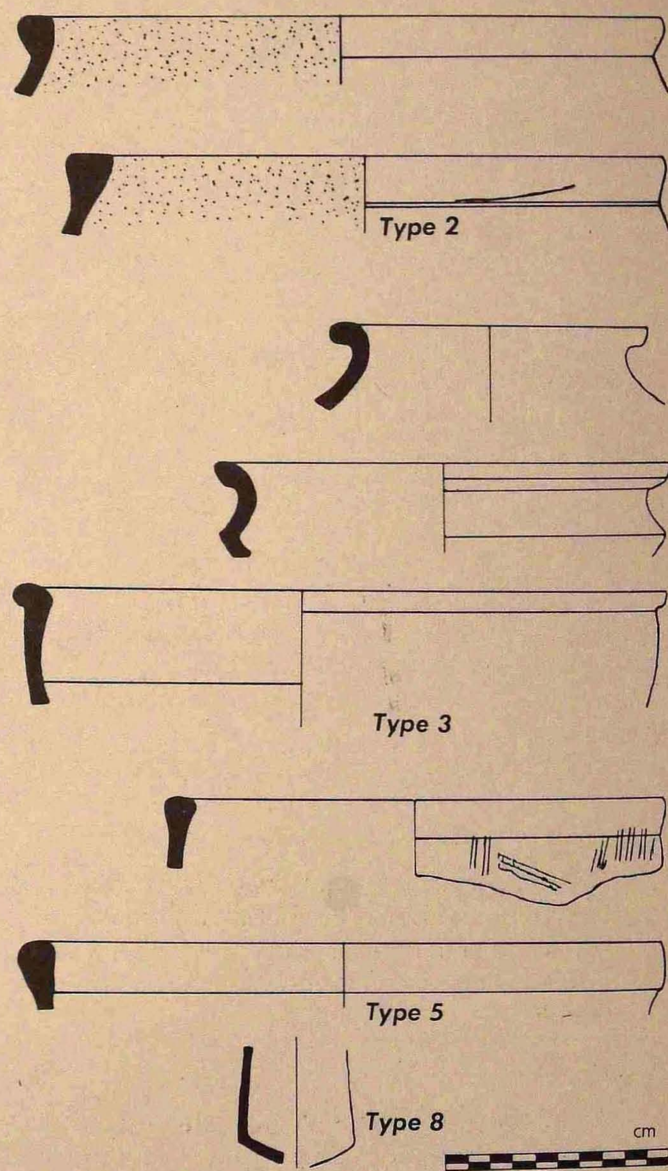
List of pottery types :

2.2/? /M
3.2/III /M
3.3/IV /M
3.3/V /M
5.1/VII/C
5.2/V /M
5.2/V /C
5.2/V /M/Pd
6.3/II
6.10/?

List of other finds :

1. Iron tool fragments
2. Iron slags
3. Grooved tiles
4. Conch shells with large holes made to remove the meat.

Plate 74 : Pottery types — Kaḷaiyoṭai.



Tulukkaṉ Kōṭṭai — Karaveṭṭi

One inch sheet no :

Point Pedro AA23, A3, 4

Mosaic sheet no :

AA23

Approach :

The site is within two kms from the Nelliyaṭi Junction in Karaveṭṭi; a road deviating towards north from the junction leads to the site.

Description :

The site has been earlier reported by Mr. S. Krishnarajah of the Dept. of History, University of Jaffna, Our visit to the site was in late 1984. Detailed studies in the site were not possible due to the prevailing political turmoil in Jaffna. However, a brief observation is recorded in this thesis in order to make the picture comprehensive.

This is a site of structural remains. The whole area is a mound of cultural debris. Considerable number of chiselled coral stones, limestones, bricks, grooved tiles, and TRRW sherds were found scattered in an area of 5 acres. Presently the site has been divided into plots of private land, both for housing and gardening. The possibilities of the site being totally disturbed is quite imminent. A place called Māyakkai is nearby the site. A limestone cavern, a pond and a folk temple for Nāccimar (seven maidens) are found there. An exorcist in this place told us that he buried two relics of inscribed or carved stone slabs (considering them sacred) in the sanctum of his private folk shrine for Periya tampirāṉ.

Soil :

The terrain is of limestone outcrops and there are a few exposed caverns formed by the collapse of their roof. The soil here is of red loam.

Water resources :

Perennial, saline-free water is available in the wells dug into the limestone bed rock. The water table is at considerable depth compared to the neighbouring areas, as this site has been elevated by cultural debris. There is a large pond nearby known as Māyakkai kuḷam. The pond seems to have formed naturally by the collapse of the limestone surface.

Coastal prospects :

The coastline of Polikaṇṭi is nearby, within one km distance. This coastline is known for its contacts across Palk Strait.

Grazing-land :

The limestone terrain scrub and grassland around the pond are suitable for grazing.

Present cultivation :

Tobacco and vegetable gardens.

Availability of building material :

Limestone outcrops of excellent quality are found in abundance. In texture and colour they resemble the raw material of limestone sculptures found in the Peninsula. The area is known for its limestone quarries. There are evidences that the stones quarried here were used to construct temples in the recent past. Presumably the Māyakkai kuḷam itself could have either formed or been extened by heavy quarrying in this spot. Besides limestone, coral stones are also available in plenty along the coast line.

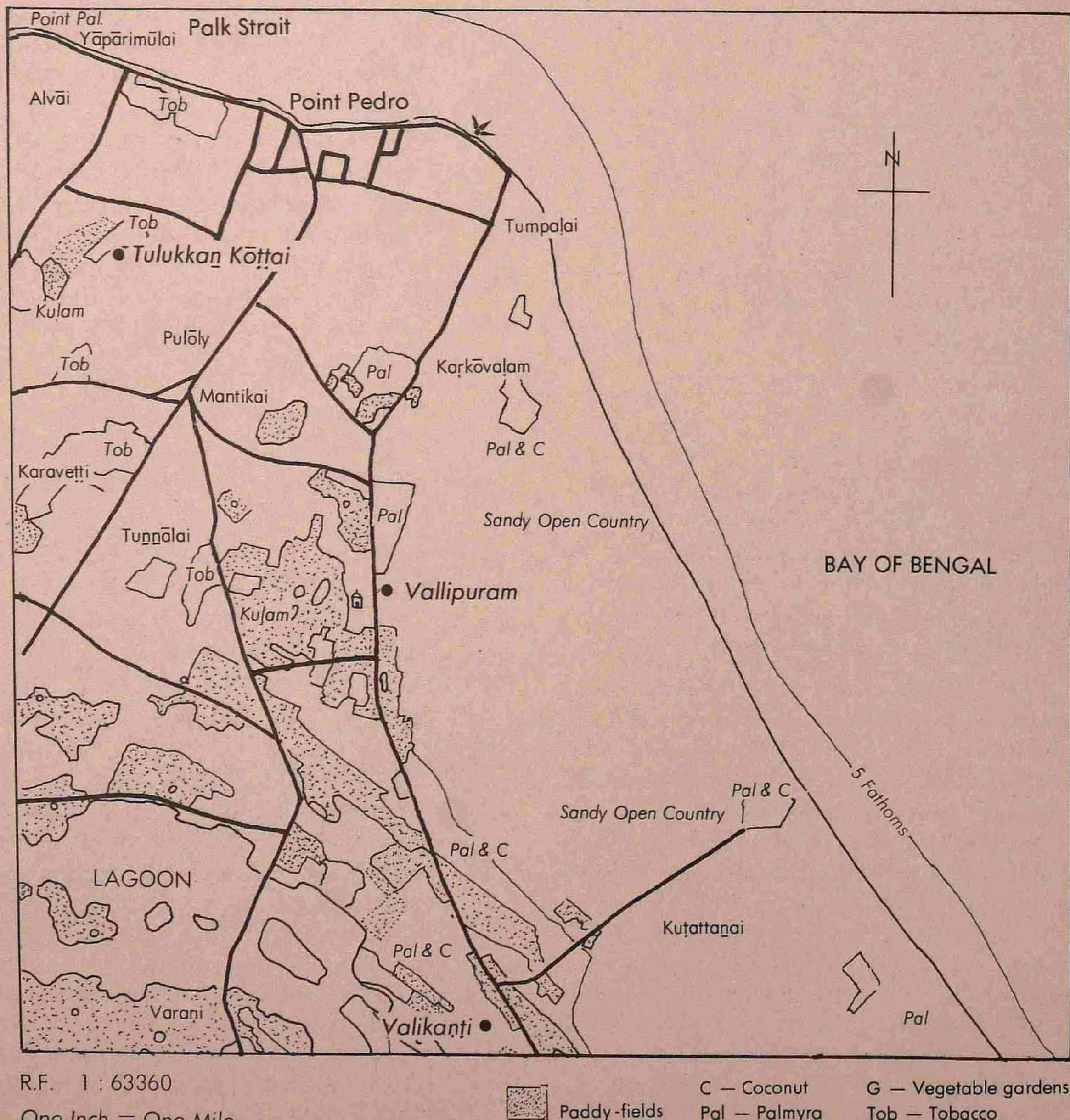
Disposition :

This is an inland settlement of vaṭamarāṭci region. Geographically vaṭamarāṭci is an identifiable unit within Jaffna peninsula separated by the Toṇṭamāṉāṟu lagoon. Vast tracts of its land are sand dunes. Mainly coastal sites were so far noticed in this region. The only area in the region with red loam earth, horticultural potentialities and with a dense population is Karaveṭṭi and its surroundings, where the Tulukkaṉkōṭṭai site is situated. The site is significant, as this is the first inland site so far found in Vaṭamarāṭci, and it implies that this location has emerged as a local central place. This status to Karaveṭṭi continues to the day.

Remarks :

In our brief survey the site has yielded only the Thick Rim Red Ware sherds but in considerable numbers. In Jaffna, TRRW occuring alone has been noticed in some other sites also, i.e. Āṉaiviḷuntāṉ, Tikaḷi etc. On the strength of the exclusive occurence of TRRW, we arrive at a date after the early centuries of the Christian era and before the emergence of the kingdom of Jaffna (c. 6-10 century A.D.).

Plate 75 : *Tulukkaṉ kōṭṭai — site map.*



Vallipuram

Latitude :

9° 47′ 25″ N

Longitude :

80° 14′ 30″ E

One inch sheet no :

Point Pedro A^A 23, A3, 4

Mosaic sheet no :

AA23

Approach :

The potsherd distribution is sporadic in the surrounding areas of the present temple at Vallipuram, from Kaṛkōvaḷam to Kuṭattaṉai. The distribution is intense in a mound north of the temple.

Description :

In 1972 there was a report that a mound near the temple had yielded a large pot in a cist covered by orthostats and that this was possibly a Megalithic burial site. The above find was described as an urn in a cist burial.[39]

In our survey in the above mentioned spot, we were able to notice a few sherds of historic Black and Red Ware, Thick Rim Red Ware and structural remains like grooved tiles.

The other neighbouring spots of the temple also yielded similar or even late types of pottery.

Soil :

The site is on the dune sands, but similar to many other sites of this stretch, the sherd distribution was noticed mainly along the Lagoon–side periphery of the sandy stretch, where the dune sand ends and lagoon alkali begins.

Water resources :

Perennial, saline free, fresh-water at shallow depth in small *turavu* type of wells.

Coastal prospects :

The Bay of Bengal and the Lagoon are on either side of the location.

Grazing-land :

Available along the Lagoon side fields.

Availability of building material :

Coral and hardened sedimentary deposits (shale) along the coast.

Present cultivation :

A narrow stretch of paddy-fields is seen along the Lagoon coast.

Disposition :

This site could have emerged with the beginnings of the long caravan route that went along the eastern coast of Sri Lanka.[40] One who observes the satellite photos of south India and Sri Lanka can immediately recognize the proximity of this location to the Coromandel coast, particularly to the Point Calimere and Nākapaṭṭiṉam region of Tamil Nadu.

Remarks :

Years ago, a valuable historical document, the Vallipuram gold plate, was discovered from this area. There are many published articles on this

evidence, and the latest is by Dr. A. Veluppillai who, on Palaeographical grounds, dates this to the fourth century A.D.[41] This date tallies with the lower dates we get for this site on the basis of pottery.

We tend to assign the beginning of this site to the early centuries of the Christian era, if not earlier, on the strength of the presence of historic BRW and a few pieces of Rouletted Ware. The site had a long sequence up to Dutch times as indicated by finds like Thick Rim Red Ware, Grooved Rim Ware and by the Medieval, Cētu and European coins.

List of pottery types

2.2/? /M
4.5/? /F
5.1/VII/M
5.2/V /M
7.5/? /M

List of other finds :

1. Iron slags
2. Grooved tiles
3. Medieval coin :
   Legend S'rī Vijayabāhu
4. Medieval coin .
   Legend: S'rīmat Sāhasamalla
5. Dutch coins
6. Early British and Tiruvanantapuram coins

Plate 76 : *Pottery types — Vallipuram.*

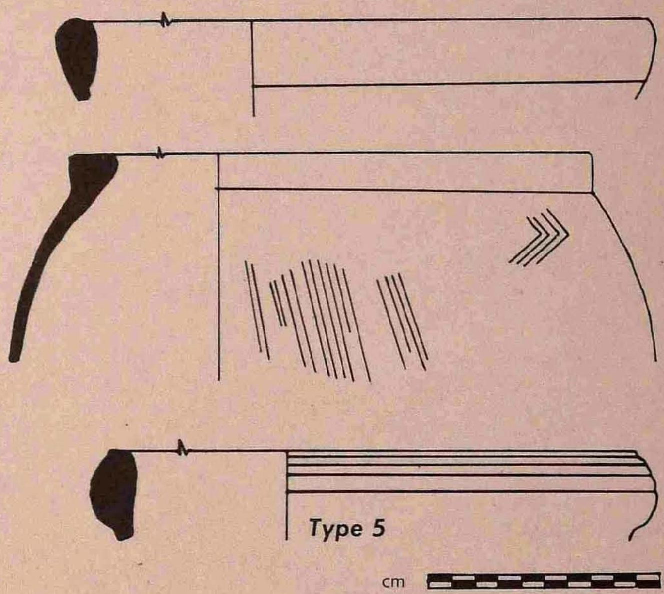


Plate 77 : *Typical landscape of the dune-sand stretch of Vaṭamarāṭci. The photograph has been taken at Maṇal Kāṭu, between Vallipuram and Nākarkōyil.*



Valikaṇṭi, Kuṭattaṉai

Latitude :

9° 45′ 15″ N

Longitude :

80° 14′ 55″ E

One inch sheet no :

Point Pedro A^A 23, A3, 4

Mosaic sheet no :

A3

Approach :

The site is in a coconut plantation, and lies along the western side of the Point Pedro—Marutaṅkēṇi road between Vallipuram and Kuṭataṉai Junction.

Description :

The distribution of sherds covered an area of about 10 acres.

Soil :

The artifact distribution is in the dune-sands, but they are peripheral dunes of the Vaṭamarāṭci stretch, merging with the alkaline lagoon coast.

Water resources :

Perennial, saline free, groundwater is available at shallow depth.

Coastal prospects :

The site is adjoining the Lagoon coast of the Vaṭamarāṭci strip. The location is a link to the Teṉmarāṭci side of the Peninsula as a natural ford forms during summer. Further, it could have been a wayside stop-over along the ancient caravan route,[42] as this site has been located in the peripheral area where the dunes end, and the Lagoon coast *taravai* begins. The Lagoon coast *'taravai'* land would have been ideal for the ancient caravans to traverse during summer.

Natural vegetation :

Scrub and palmyra.

Grazing-land :

Available in the adjoining paddy-fields along the Lagoon coast.

Present cultivation :

Coconut plantations in the site, and paddy along the Lagoon coast.

Remarks :

The site could be dated from the early centuries of the Christian era to late medieval times, as indicated by the available pottery (HBRW, TRRW, GRW, etc).

List of pottery types :

2. /? /C
5.1/VII/M
5.2/V /M
5.2/V /C
8.3/? /M

List of other finds :

1. A terracotta human face

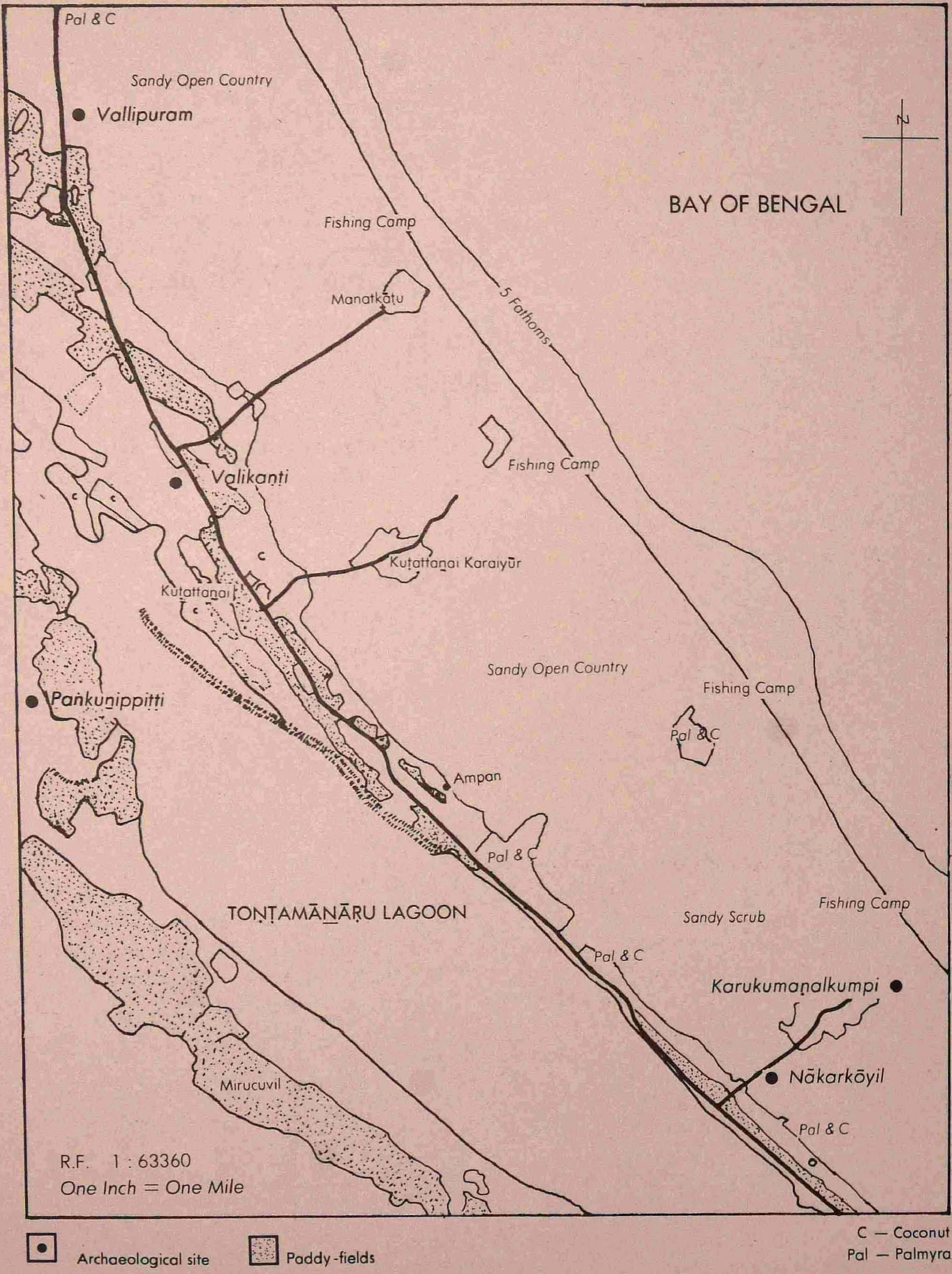


Plate 78 : *Vallipuram, Valikanti, Nākarkōyil — site map.*

Nākarkōyil, Karukumaṇalkumpi

Longitude :

80° 18′ 20″ E — Nākarkōyil
80° 19′ 10″ E — Karukumaṇalkumpi

Latitude :

9° 41′ 55″ N — Nākarkōyil
9° 42′ 25″ N — Karukumaṇalkumpi

One inch sheet no :

Point Pedro A^A 23, A3, 4

Mosaic sheet no :

A3

Approach :

There are two sites at Nākarkōyil, one adjoining the present temple, and the other at Karukumaṇalkumpi about 3 km. east, near the coast of the Bay of Bengal. The Nākarkōyil temple is near the Point Pedro — Marutaṅkēni road, about 14 miles from Point Pedro, and the site is adjoining the temple in the eastern direction. The Karukumaṇalkumpi site is in the Nākarkōyil fishing village facing the Bay of Bengal.

Description :

At Nākarkōyil, the sherds were found distributed in the sand dunes in an area around 10 acres. At Karukumaṇalkumpi a considerable number of glass and Paste beads and sherds were collected in the sandy scrub.

Soil :

Both sites are in the sand-dunes. The Nākarkōyil site is at the western periphery of the sandy stretch, where the dunes merge with the Lagoon coast *taravai*. The Karukumaṇalkumpi site is in the middle of the dune stretch near the sea coast. The sand underlying the top layer here is ilmanite which is grey in colour and this feature renders the name Karukumaṇalkumpi for the site (grey sand dunes).

Water resources :

Perennial, saline-free, fresh-water at shallow depth. There is a pond near the Nākarkōyil site.

Coastal prospects :

As in the case of the other sites of the stretch, these sites are flanked by sea on the one side and the Lagoon on the other. Nākarkōyil is at present a fishing centre.

Natural vegetation :

Scrub, particularly *'Nāval'*.

Grazing-land :

Available in the Lagoon coast.

Present cultivation :

None in the vicinity of the sites, but there is a narrow patch of paddy-fields along the Lagoon coast.

Local legends :

The legends suggest that the Nākarkōyil had its origins in the folk worship of serpant cult, which was later sanskritised. The Portuguese records of Queroz mention that the Portuguese destroyed a temple at this site in the 16th century.

Disposition :

It could be suggested that the Nākarkōyil site was on the caravan route and that Karukumaṇalkumpi was a port site.

Remarks :

The site has a variety of pottery ranging from historic Black and Red Ware and Rouletted Ware to Grooved Rim Ware, including Chinese and Islamic ware.

On the basis of these evidences, the origin of the site could be placed around the dawn of the Christian era, and its decline towards the end of the Jaffna Kingdom. The pottery evidences suggest that Nākarkōyil is more ancient than Vallipuram.

Nākarkōyil

List of pottery types :

2.2/V /C
4.5/? /F
4.6/III /F
4.6B/III/F
4.7/? /F
5.1/VII/C
5.2/V /C
5.3/V /C
6.7/?
6.10/
7.1/? /C
7.2/? /C
9.6/III /C

List of other finds

1. Iron tools
2. Iron slags
3. Glass beads (dark blue and orange)

Karukumanal Kumpi

List of other finds :

1. Paste beads (40 beads)
2. Black glass (15 beads)
3. Light blue (7 beads)
4. Dark blue glass (3 beads)
5. Plain glass (one bead)
6. A Cētu coin
   Obverse : seated bull, crescent, legend 'Cētu'
   Reverse : Standing King and a trident.
7. A coin with a legend 'Cētupa' in the obverse and an unidentified figure on the reverse.
8. Dutch coins
9. Early British coins



***Plate 79 :** Karukumaṇal kumpi, Nākarkōyil. The stretch is rich in early pottery, coins and beads. The local children had collected nearly 60 paste and glass beads in a few minutes search.*

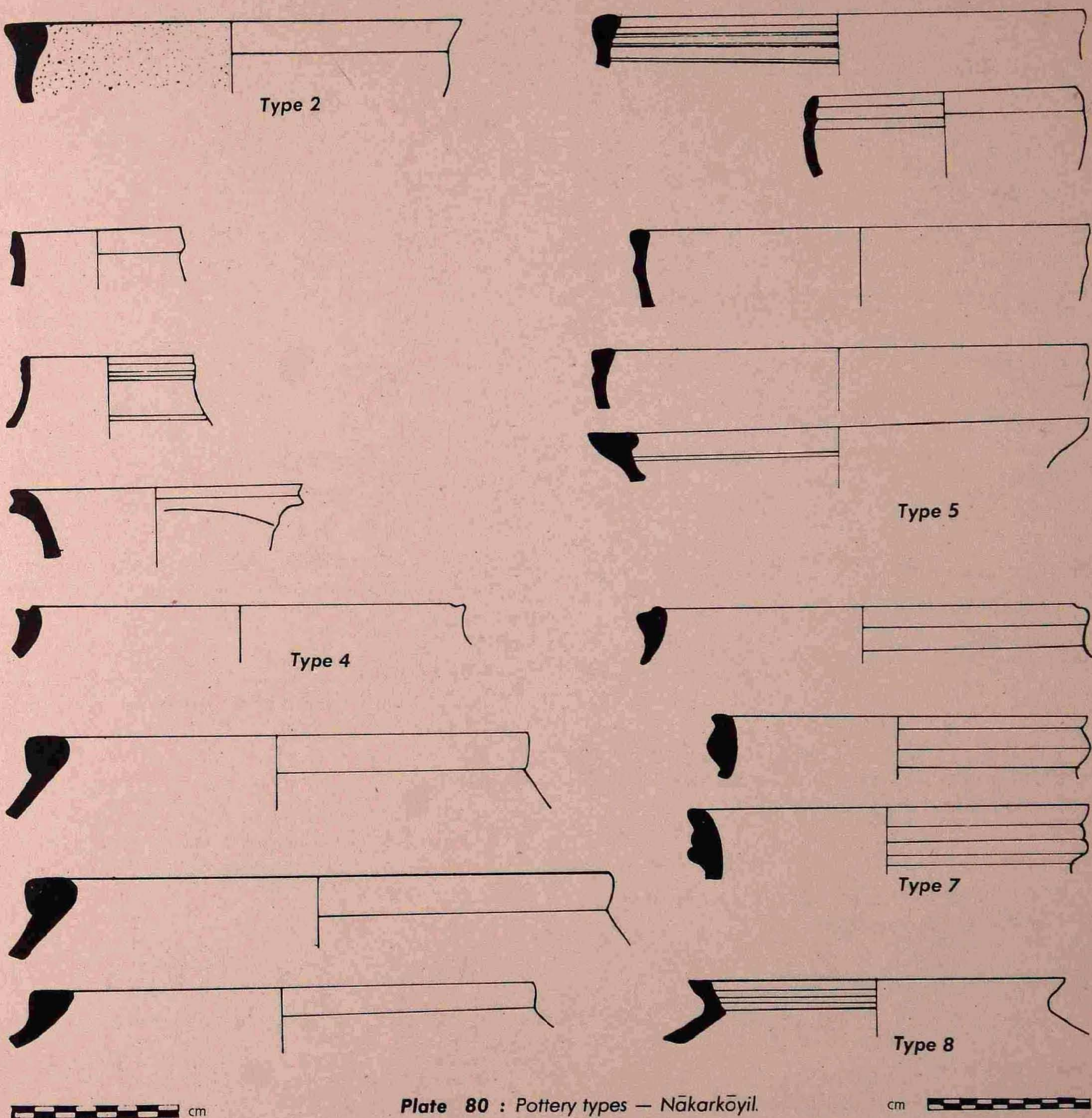


Plate 80 : *Pottery types — Nākarkōyil.*

Tā̱laiyaṭi — Cempiyaṉpaṟṟu

Latitude :

9° 36′ 20′ N

Longitude :

80° 25′ 40′ E

One inch sheet no :

A9, 10, 14, 15 — Elephant Pass

Mosaic sheet no :

A4

Approach :

This is located by the Tā̱laiyaṭi—Vettilaikēṇi coastal road, about 2 km. from Talaiyaṭi.

Description :

The sherds were distributed in an acre of sandy plot alongside the road.

Soil :

Dune-sand.

Water resources :

Perennial, saline-free, drinking-water at shallow depth.

Coastal prospects :

The site has the Bay of Bengal on the east and the Toṇṭaimāṉāṟu lagoon on the west. Tā̱laiyaṭi is at present, a well-known fishing centre.

Natural vegetation :

Scrub forest and palmyra.

Grazing-land :

Available in the scrub.

Present cultivation :

None in the vicinity, but paddy is cultivated in a narrow patch along the Lagoon coast.

Disposition :

Similar to the other sites of this stretch, this could have been a way side stopover along the ancient caravan route.

Remarks :

The pottery dates range between the dawn of Christian era, and late medieval times. The place name Cempiyaṉpaṟṟu indicates the Cō̱la connections of the site.

List of pottery :

2.?/? /C
4.5/? /F
4.6/? /F
4.7/? /F
5.1/VII/C
5.2/V /C
5.3/V /C
6.1/? /?
8.4/III /C
9.2/III /C

List of other finds :

1. Fragments of pestle stones
2. Fragments of iron tools
3. Iron slags
4. Glass pieces.

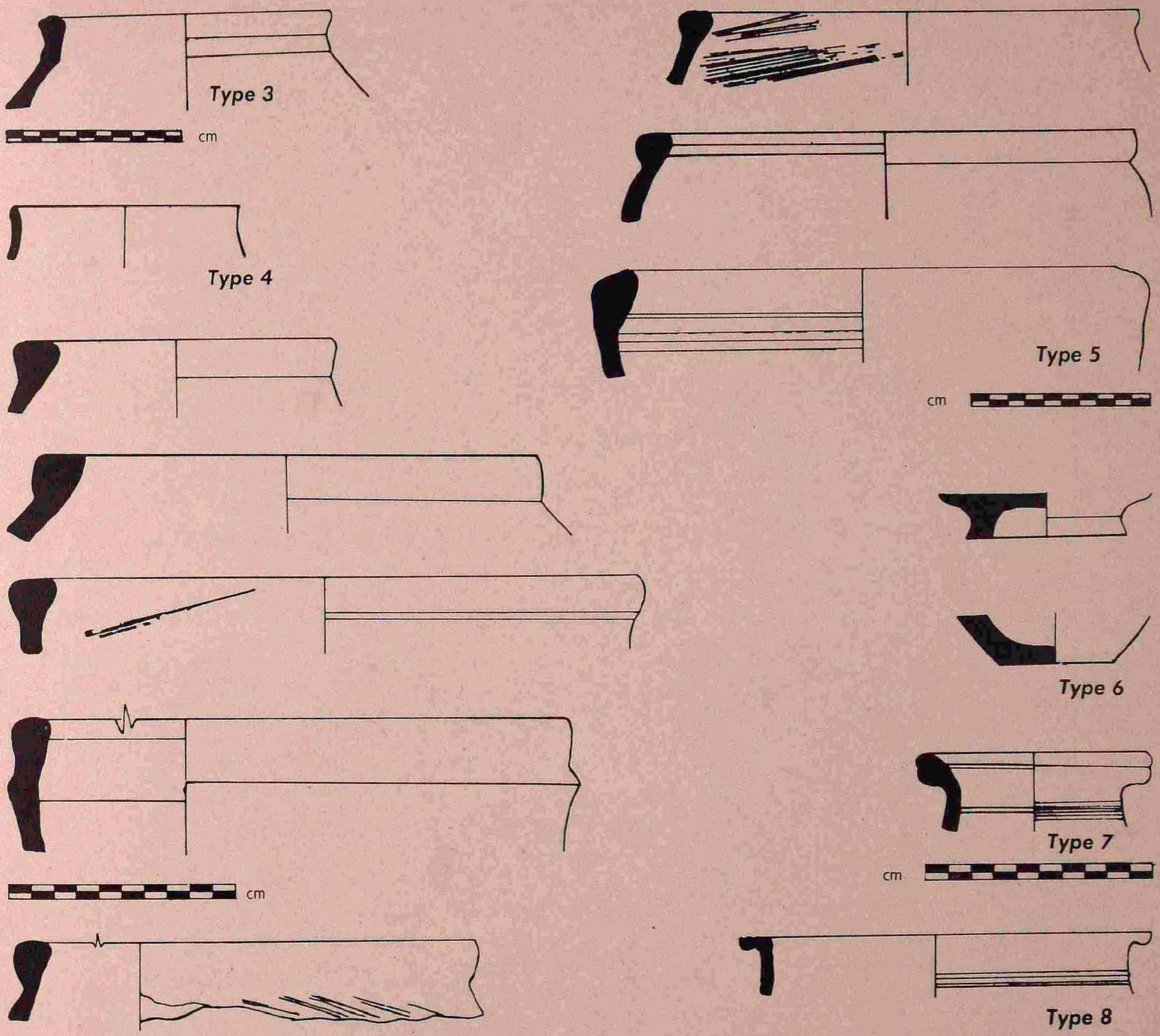


Plate 81 : *Pottery types — Tā̱laiyaṭi.*

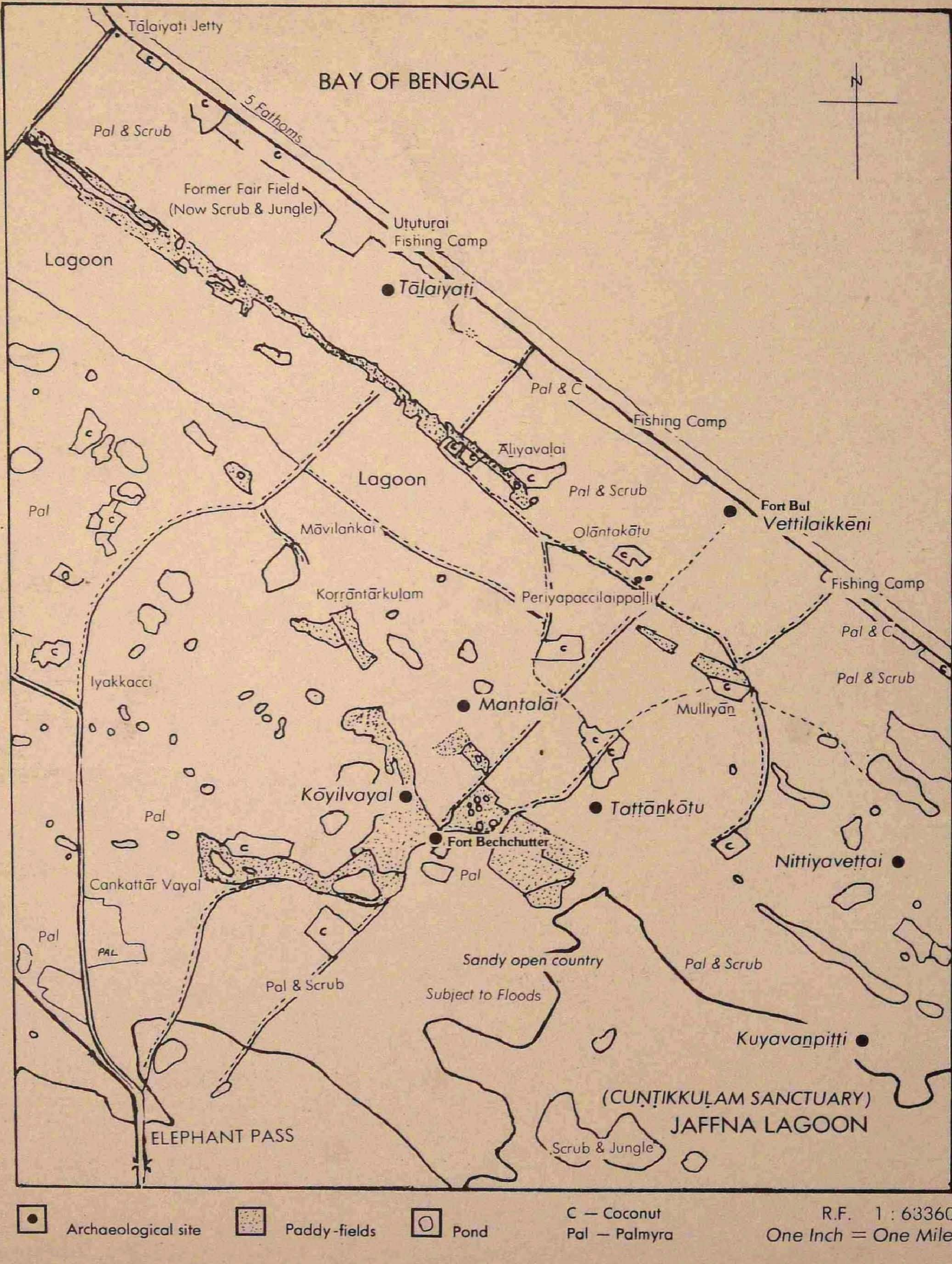


Plate 82 : *Paccilaippalli — site map.*

Vettilaikkēṇi — Paccilaippaḷḷi

Latitude :

9° 35′ 00″ N

Longitude :

80° 27′ 45″ E

One inch sheet no :

A9, 10, 14, 15 — Elephant Pass

Mosaic sheet no :

A9

Approach :

The site is by the side of the Tāḻaiyaṭi — Kaṭṭaikāṭu coastal road. A modern *ghōri* (obelisk) and the remains of the old Dutch fort are seen here.

Description :

The site with an area of about 10 acres, faces the Bay of Bengal with artifacts of different periods found mixed on the surface. They range from the historic Black and Red Ware and Rouletted Ware to the late Dutch and Early British tiles. Compared to the other sites of this stretch, the distribution of artifacts is rich at this site.

The Dutch fort, the remains of which are found here, had obviously been constructed on the top of an earlier archaeological site.

Soil :

Dune-sands.

Water resources :

Perennial, saline-free, drinking water at shallow depth.

Coastal prospects :

There is a small fishing village adjoining the sea coast.

Natural vegetation :

Scrub-forest in the hinterland.

Grazing-land :

Available in the scrub and in the *taravai* plains.

Present cultivation :

Nil

Availability of building material :

The Dutch Fort remains here are of coral architecture and the coral must have come from the Lagoon side.

Disposition :

This site has a strategic importance as it is located on the ancient caravan route of the eastern coast.[43] Beyond this point, up to Vaṉṉi the old route would have traversed the marsh lands. Thus, this could have acted as a customs centre for the caravans entering and leaving the Peninsula. The Dutch had constructed two forts close to each other here to check the coastal and inland tracks. Besides its strategic location on the caravan route, the site was also a point of foreign contact by sea as indicated by the considerable number of ancient and medieval foreign ware sherds.

Remarks :

As in the case of the other major sites along this stretch, the date of the site too ranges from the dawn of the Christian era to the early British period.

List of pottery types :

2.2/V /C
2.3/? /M
4.5/? /F/Pd
4.6B/V/F
4.7/? /F
5.1/VII/C
5.2/V /C
5.3/VI /C
6.4/? /?
6.6/? /?
6.7/? /?
6.10/? /?
8.5/V /M/D

List of other finds :

1. Iron slags
2. Pieces of rubbing stones or pestles
3. A Jaffna limstone core with flaked marks
4. Black glass beads
5. Blue glass beads
6. Dark-blue glass beads
7. Carnelian and paste beads
8. Yellowish white pearl-like pellets; number of them were collected
9. Terracotta beads made out of grey and green clay with etched marks
10. Glass slags
11. Coin — Obverse : Standing figure of the king; Reverse : legend — *S'rī Ireka* or *S'rī Dareka*; Grantha-Tamil characters, Palaeographically assignable to 6-8 century A.D.; *Dareka* could be the local imitation of a Roman coin.
12. Coin Unidentified
12. Coin — Unidentified
13. Coin — Unidentified fragment

Plate 83 : *Pottery types — Vettilaikkēṇi.*

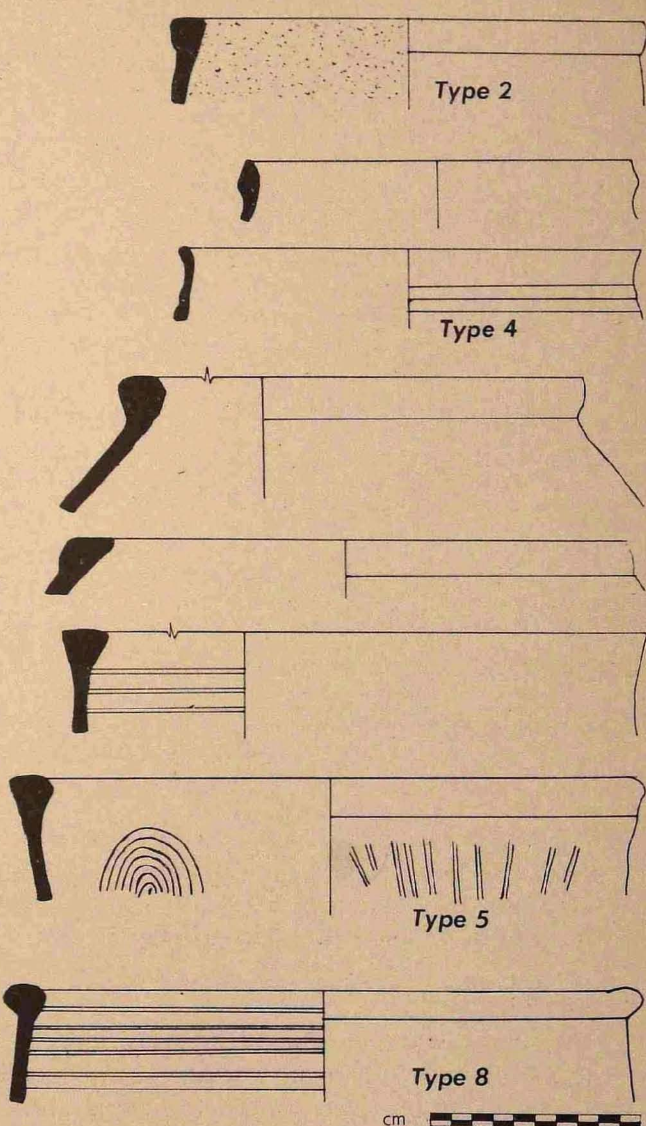
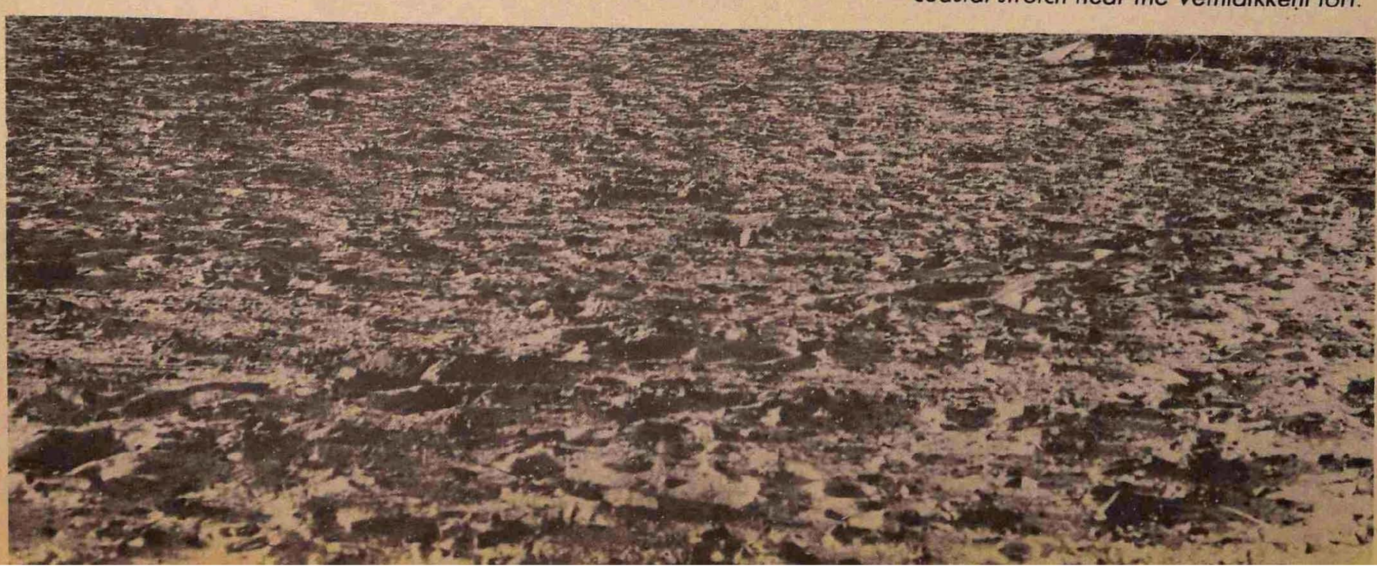


Plate 84 : *Early pottery strewn in the coastal stretch near the Vettilaikkēṇi fort.*



Other Paccilaippaḷḷi Sites

Latitude :

9° 32′ 24″ N — Kōyilvayal
9° 33′ 53″ N — Maṇṭalāi
9° 33′ 25″ N — Taṭṭāṉkōṭu
9° 31′ 55″ N — Kuyavaṉpiṭṭi
9° 32′ 50″ N — Nittiyaveṭṭai

Longitude :

80° 25′ 50″ E — Kōyilvayal
80° 26′ 05″ E — Maṇṭalāi
80° 26′ 45″ E — Taṭṭāṉkōṭu
80° 28′ 20″ E — Kuyavaṉpiṭṭi
80° 28′ 30″ E — Nittiyaveṭṭai

One inch sheet no :

A9, 10, 14, 15 -- Elephant Pass

Mosaic sheet no :

A9

Description :

The five sites mentioned here are located in the scrub forest of a small area of about 5 sq.km. and they are discussed under one report due to their homogeneity. The possibilities of locating some more sites of this category in the neighbouring scrub forest has been reported by G.N. Subramaniyam of Kōyilvayal who guided us to the sites.

Approach :

The Kōyilvayal site could be approached by a metalled road from Iyakkacci; Maṇṭalāi lies between Kōyilvayal and Vettilaikēṇi; Taṭṭāṉkōṭu is near Kōyilvayal, by the side of a modern canal that was dug to connect the Lagoon with the Cuṇṭikuḷam sanctuary; Kuyavaṉpiṭṭi is near Vaṇṇāṉkuḷam facing the Cuṇṭikuḷam sanctuary lagoon; and Nittiyaveṭṭai is nearby the Pullāveḷi church.

In the paddy-fields of the Kōyilvayal site, a hoard of medieval coins was discovered. A Dutch fort, lying parallel to the Vettilaikēṇi fort, is located here.

Maṇṭalāi is a sandy site covered with scrub where Thick Rim Red Ware sherds, Grooved Rim Ware sherds and other artifacts were sporadically found.

Taṭṭāṉkōṭu and Kuyavaṉpiṭṭi yielded medieval coins as well as Paste beads and Thick Rim Red Ware, Grooved Rim Ware sherds in concentrations. Medieval and Dutch coins were collected at Nittiyaveṭṭai.

A number of brick cum coral structural remains are noticed in this area. They include a fort, a few temples and residential quarters, all abandoned and ruined. They stand as evidences of the ghost settlements that once flourished here.

Soil :

Kōyilvayal and Kuyavaṉpiṭṭi sites have alkaline soil. The others are in the dune-sands, but these dunes are not high, and undulating like the Vaṭamarāṭci coastal dunes.

Water resources :

Paccilaipaḷḷi possesses an excellent potentiality of water resources. It is capable of yielding perennial, saline-free, fresh-water, in large quantities compared to the dune-sands of Vaṭamarāṭci.

The *turavu* dug at this region is considerably wide compared to the *turavu* of the other parts

of the Peninsula. At many places the sand, dug out of the *turavu* could be seen heaped like a dune nearby. Sometimes, the *turavu* has four entrances on all the four sides. A considerable quantity of water is available in these *turavus* even at the peak of summer. The vegetable gardens of this area are irrigated by hand lifting, using a traditional palmyra leaf bucket called *Pattai.*

Coastal prospects :

The early settlers must have utilized the Cuṇṭikuḷam sanctuary lagoon and the Bay of Bengal coast for subsistence and communication. The Cuṇṭikuḷam sanctuary has a few islets, which are being used by the local people to keep their cattle herds (*Paṭṭi*).

Natural vegetation :

Scrub forest.

Grazing-land :

Available in the scrub, in the Lagoon coast *taravai*, and in the islets of the Cuṇṭikuḷam lagoon.

Present cultivation :

Paddy at Kōyilvayal, vegetable and fruit gardens at Maṇṭalāi and Taṭṭāṉkōṭu; none at Kuyavaṉpiṭṭi and at Nittiyaveṭṭai.

Disposition :

All these sites flourished in the old days, because of their disposition in the Vanni—Jaffna communication link. As mentioned in the report of Vettilaikēṇi, it was on realizing this fact that the Dutch had constructed two forts in this area. The Dutch seem to have been very active in the area, as testified to by the forts, buildings, pottery, coins and by place names like Ulantakāṭu (land of Hollanders).

Remarks :

The pottery analysis places the origins of these sites at the time of the beginnings of the kingdom of Jaffna. None of them yielded early pottery like the historic Black and Red or Rouletted or even Chinese or Islamic wares. The available pottery is Thick Rim Red Ware, and Grooved Rim Ware in association with the medieval coins ranging from those of S'rivijayabāhu to Rāṇi Lilavati (11-13 Centuries) and a number of Dutch coins.

Thus, these sites seem to have emerged with the re-colonization of Vaṉṉi in medieval times, when fresh waves of migrants moved from south India to Vaṉṉi, through the Jaffna peninsula, using the Vaṭamarāṭci, Paccilaipaḷḷi sand pass route. Legends narrating the arrival of the Vaṉṉi chieftains tend to confirm this view.[44] The settlements discussed in the report survived to early British times until the opening up of a new communication link, the present Jaffna—Kandy road.

There are old people still able to recollect their grandfathers' tales about the caravans and buffaloes that have passed through these settlements.

Maṇṭalāi

List of pottery types :

5.2/V/M
7.2/? /M
8.1/? /M
8.4/? /M
9.1/? /M

List of other finds :

1. Pestle-stone (alien material)
2. Terracotta smoking pipes

Taṭṭāṉkōṭu

List of pottery types:

5.1/VII/C
5.2/V /C
7.1/V /M
7.1/V /C
7.2/V /C
8.1/? /M
8.3/IV /M

List of other finds :

1. Copper slags
2. Iron slags
3. Fragment of a black glass bangle
4. A large paste bead
5. A plain glass bead

Nitiyaveṭṭai

List of pottery types :

5.2/V/M	8.3/? /C
5.3/? /M	8.4/? /C
8.1/? /M	8.5/? /M

List of other finds :

1. Coin : Legend : S'rī Rāja Līlavati

Kuyavanpiṭṭi

List of pottery types :

5.2/V/M
8.1/? /M
8.3/? /M

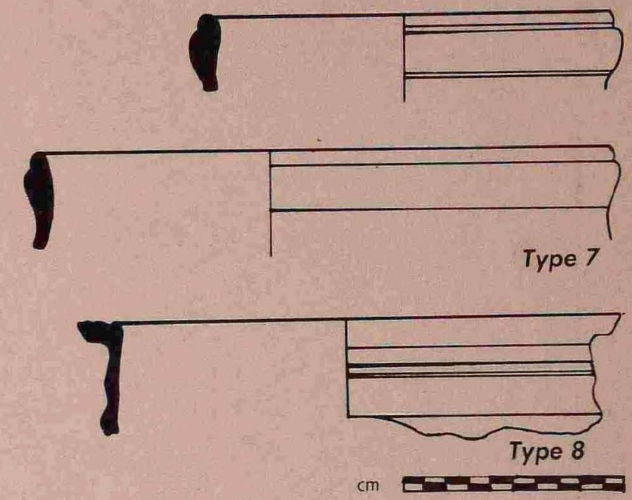
List of other find :

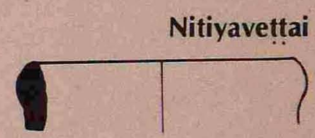
1. A Dutch coin

Kōyilvayal

List of other finds :

A hoard of medieval coins found in a pot.
Legends : Sŕī Vijayabāhu, Sŕī Parākramabāhu, Sŕī Bhuvanēkabāhu.





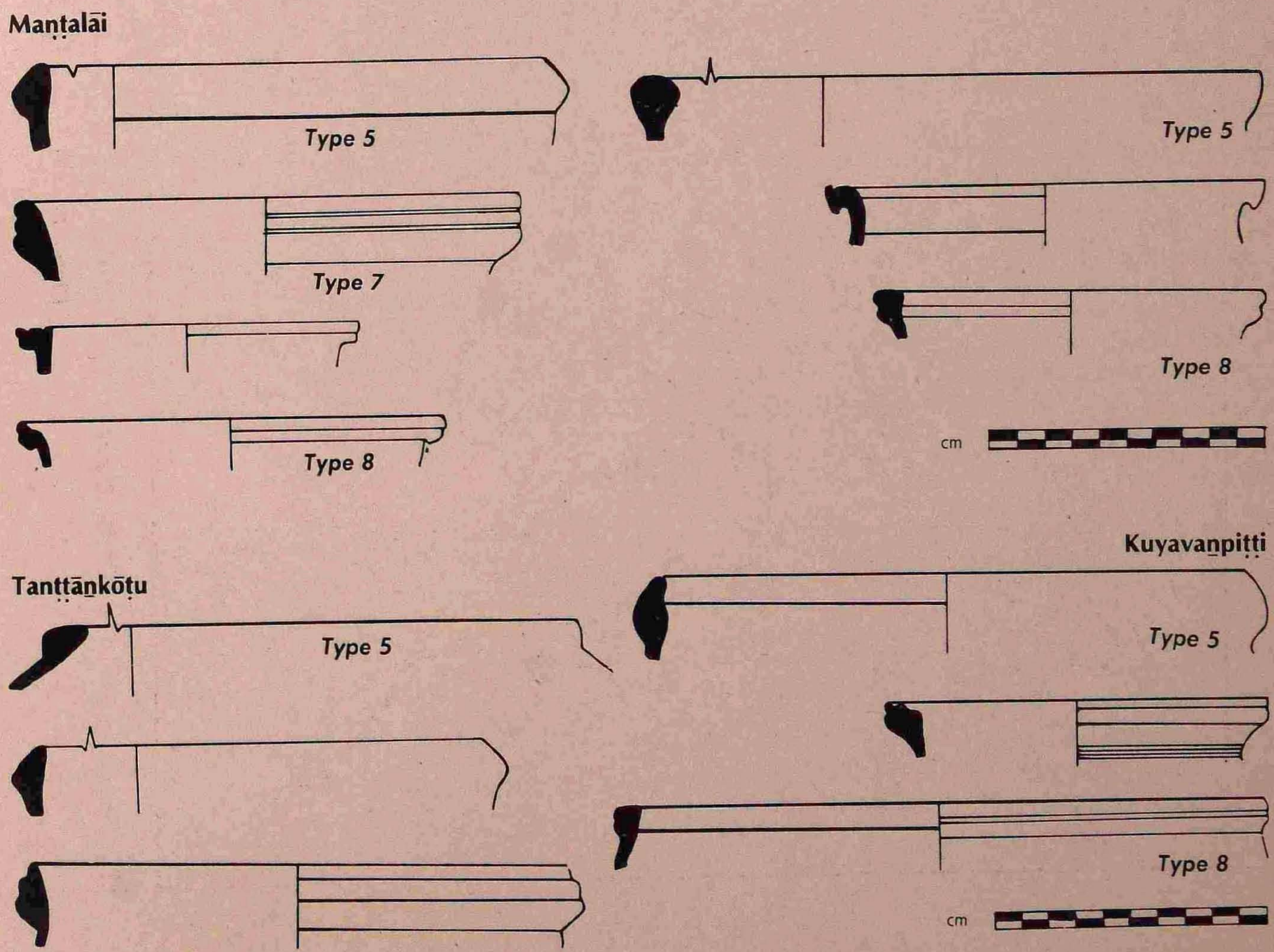


Plate 85 : *Pottery types — Paccilaippaḷḷi.*

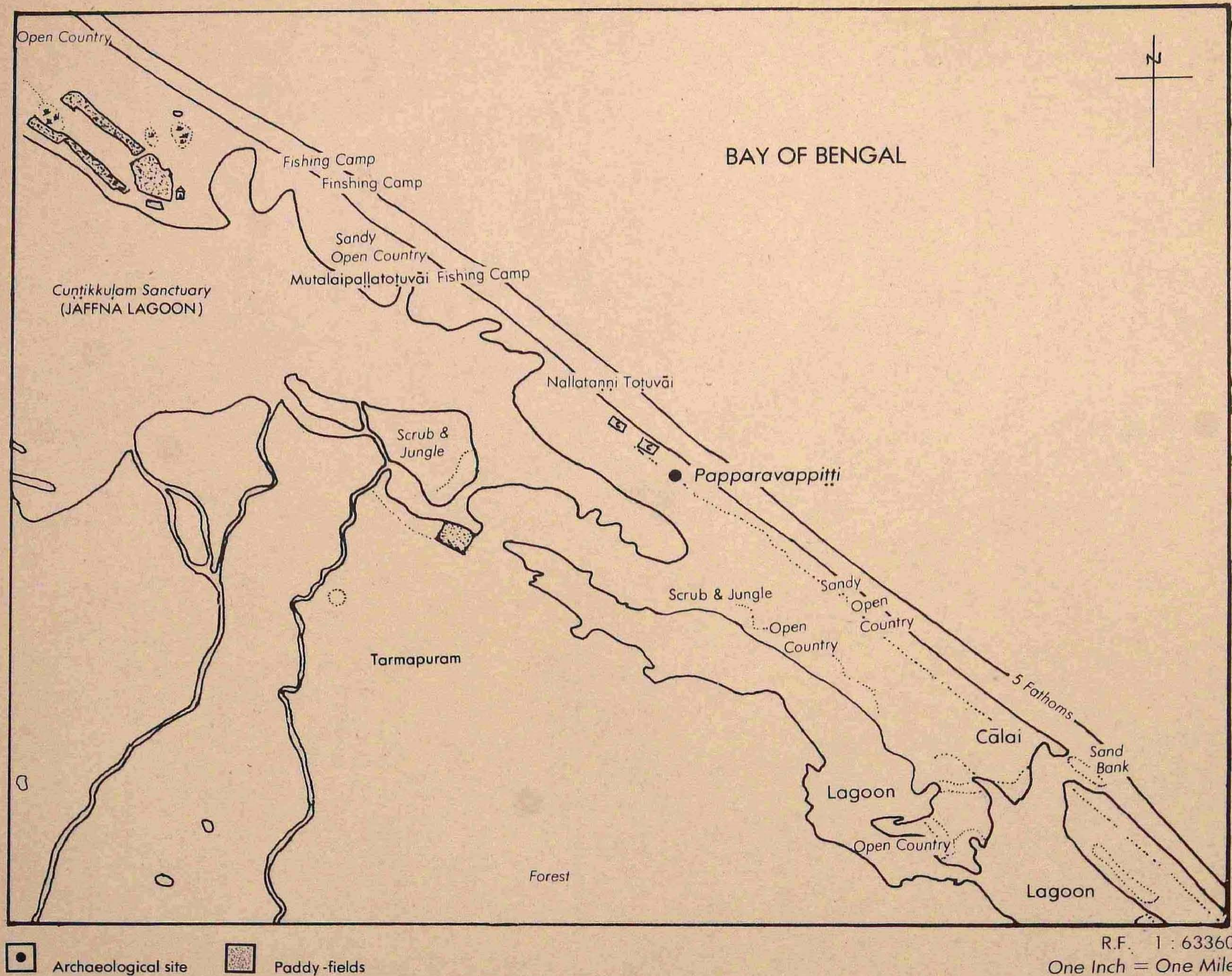


Plate 86 *: Cālai — site map.*

Papparavappiṭṭi — Cālai

Latitude:

9° 26′ 45″ N

Longitude:

80° 36′ 00″ E

One inch sheet no :

A 9, 10, 14, 15 — Elephant Pass

Mosaic sheet no :

A9

Approach :

The site is located in the sand-bar that stretches between Nallataṇṇitoṭuvai and Cālai. It is not approachable by land during rainy season. There are two fair weather tracks, one from Dharmapuram through Nallataṇṇitoṭuvai, and the other from Māttalan̲ through Cālai, running across a ford.

Description :

Similar to the other sand-dune sites of the Peninsula, concentrations of potsherds and other artifacts were noticed in the sand-dunes facing the Bay of Bengal. The area of distribution was around 5 acres. Similar dunes were reported in the neighbouring place Kōramōṭṭai, which was not inspected by us.

Soil :

Dune-sand along the deep sea coast and alkali along the Lagoon coast.

Water resources :

Perennial, saline-free, groundwater is available. There are a few water holes nearby, and the name 'Nalla-taṇṇi-toṭuvai' (Fresh-Water Pass) for the neighbouring spot itself explains the availability of fresh-water in the location. Fresh-water trees, especially *Marutu* which grows always near a fresh water source, were found along the Lagoon.

Coastal prospects :

The Bay of Bengal coast is suitable for deep sea fishing and for navigation. Presently, there are a few fishing camps along this coast belonging to fishermen mostly from outside. The local people go for subsistence fishing in the Lagoon and in the muddy pools of the sand-bars.

Grazing-land :

The marsh lands and the Lagoon coasts are suitable for grazing. A considerable number of buffaloes was noticed in the area.

Natural vegetation :

Scrub and forest.

Disposition :

This location is the link between the Peninsula and the mainland. Nallataṇṇitoṭuvai provides a natural ford during summer to get to the mainland and thus is in a key position on the east coast caravan route.[45]

Present cultivation :

None in the vicinity. There are small coconut plantations nearby and in the interior areas. Paddy is cultivated in the *Cēn̲ai* fields (slash and burn fields) about one mile from the site.

Remarks :

The present name of the spot Paparapiṭṭi is a derivation of Papparavapiṭṭi. Papparavar was a sub caste in the fishing community.[46]

The name Cālai for the neighbouring spot near the ford is of significance. In modern Tamil it means 'Road'. In old Tamil it also meant a road side public house or any public structure like hospital, school etc. (Āṭular Cālai - hospital; Pāṭacālai - school). There are epigraphical evidences that a place called Kāntaḷūr Cālai[47] in the Cēra country was a port or a naval centre.

Nalla -taṇṇi-toṭuvai, the name of the adjoining sandy stretch is also noteworthy. The term *toṭuvai* is a familiar suffix for place names along the eastern coast. *Toṭuvai* is a Tamil geographical term for sand-bars that almost touch each other forming a lagoon in the hinterland. The *toṭuvai* is a natural passage to travel along the deep sea coast without going around the lagoon. Thus it is significant to note that the place names of the spot are reminiscent of the highway that went along this strategic sandy stretch that linked the Peninsula with the Main Island.

On the basis of Chinese stone ware and Thick Rim Red Ware sherds found here, we assign the period of occupation of this site, between c 8th to 13th century A.D.

List of pottery types

3.2/III/C
5.1/VII/C
5.2/V /C
5.2/V /C
5.3/V /C
6.7/VII/C
9.6/III /C

List of other finds

1. Iron slags
2. Carnelian and paste beads

Plate 87 : *Pottery types — Cālai.*

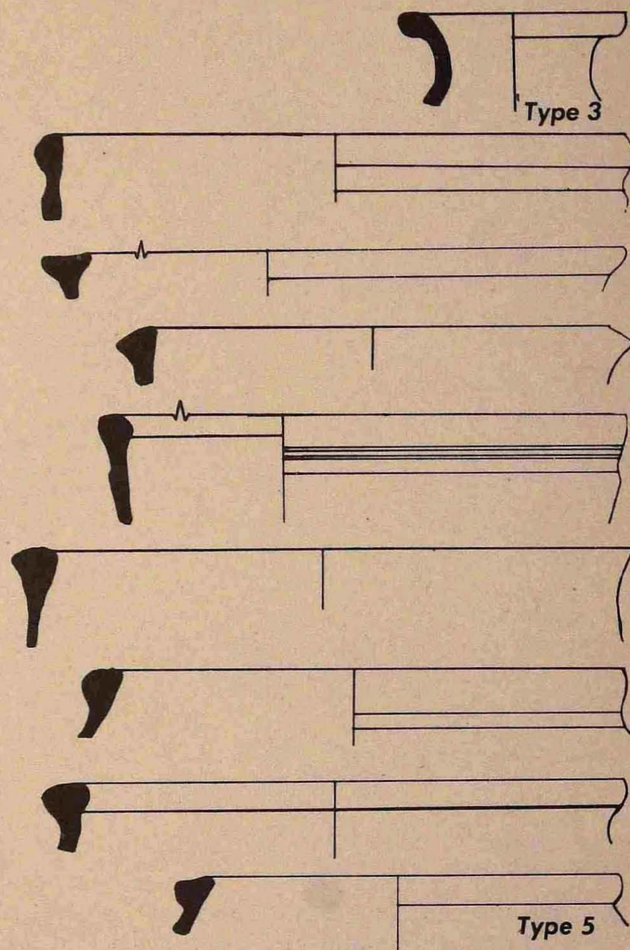




Plate 88 : *Site at Cālai, facing the Bay of Bengal.*

Irupālai

Latitude :

9° 41′ 10″ N

Longitude :

80° 03′ 30″ E

One inch sheet no :

Jaffna AA 21, 22 A 1, 2

Approach :

The site is a mound of potters' kilns. The road to the site deviates towards east at the Irupālai Junction and the site is located between paddy-fields and the Uppāṛu lagoon.

Description :

Three kiln mounds were observed in the site. One mound has a kiln still in use. The other two



***Plate 89 :** The section of the kiln-mound at Irupālai. Note the layers formed by successive production of pottery. The present kiln is seen on the top of the mound.*

are abandoned and are older. These mounds are around 10 metres in height and have grown out of successive layers of pottery produced at the site. The layers are alternately of ash and broken sherds. The cross-section of these mounds was observed and photographed when a portion was dug by earth scoopers.

One of the abandoned mounds was found with earlier types of GRW and a late type of TRRW. These pottery types yielded clues to determine the age and context of many late medieval sites in the Peninsula.

Soil :

Alkali and Saline. Lagoon silt is seen along the Uppāṟu coast. It was reported that earlier the potters obtained clay from Kaitaṭi (across the Lagoon) and that this clay was used in making a light coloured pottery. Nowadays the clay comes from Vaṉṉi.

Water resources :

Several small tanks and ponds are located in the surrounding area. Fresh-water is available in the wells at a shallow depth.

Coastal prospects :

The Uppāṟu lagoon which is facing the site must have provided the clay and navigational facilities to enter the Jaffna lagoon.

Natural vegetation :

Palmyra in the hinterland and mangrove along the lagoon.

Grazing-land :

Available in the paddy-fields.

Present cultivation :

Paddy-fields are found in a stretch along the Uppāṟu lagoon. They would have provided the hay for tempering the clay.

Disposition :

The site is located near Nallūr, the capital of the kingdom of Jaffna, and thus could have been a suburban service centre. The location is also by the side of the natural tract along the lagoon, which has become the modern trunk road that connects Nallūr with Vaṭamarāṭci. It has access

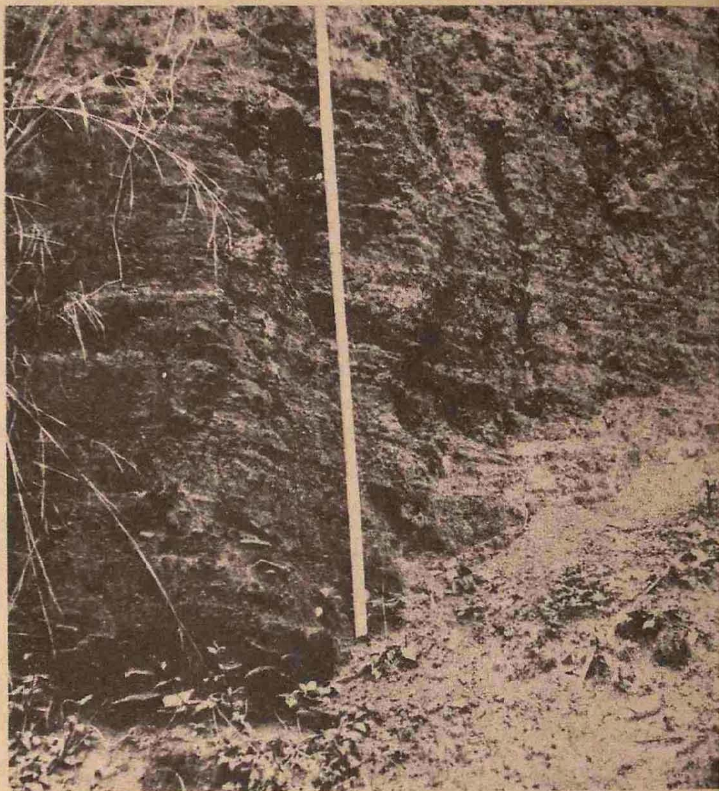


Plate 90 : *A close view of the kiln - mound section. Note the alternate layers of ash and sherds.*

to the sea through the Lagoon, for obtaining raw-material and transporting products.

Remarks :

The fact that this was a popular centre of the potters, is mentioned in a verse of Irupālai Cēnātirāya Mutaliyār, a poet of the Dutch times.[48]

The pot sherds found in this site immensely help us in understanding the Grooved Rim Ware, as all the varieties of GRW with its various rim types, forms and decorative features were found in large numbers at this kiln site. Besides, the stratigraphy of the samples also indicates the overlapping of GRW with earlier types.

The beginnings of the Grooved Rim Ware tradition can be tentatively placed around the beginnings of this millennium. We had a clear evidence in the Māntai 1982, and 1984 excavations, where the GRW overlapped with TRRW in the 10-13th century layers. It was never found in the earlier layers. The surface layers of Kantaroṭai also bear the same phenomenon.

In Jaffna, the GRW is found in large quantities in the late medieval sites throughout the Peninsula. In many sites it was found along with TRRW, 11-13 century medieval coins, and with cētu coins. In some other sites, where the type appears alone, cētu, Dutch and early British coins were found associated. Certain varieties of this ware survive to this day.

Hence, the archaeological site at Irupālai is very significant as this is the only kiln site found in the Peninsula providing evidence of the local production of GRW, besides bearing varieties of the Ware.

Interestingly, it was noticed that some of the GRW rim as well as body sherds found here were black and red. Such sherds were also noticed at Kautārimuṉai. However, it needs further confirmation to say that the black and red mode of production survived to the times of GRW.

The beginnings of the Irupālai potters' settlement can be assigned to c.13-14 century A.D., as it provided evidence in its lower layers to the overlapping of GRW with a late variety of TRRW. The potters' settlement continues to this day.

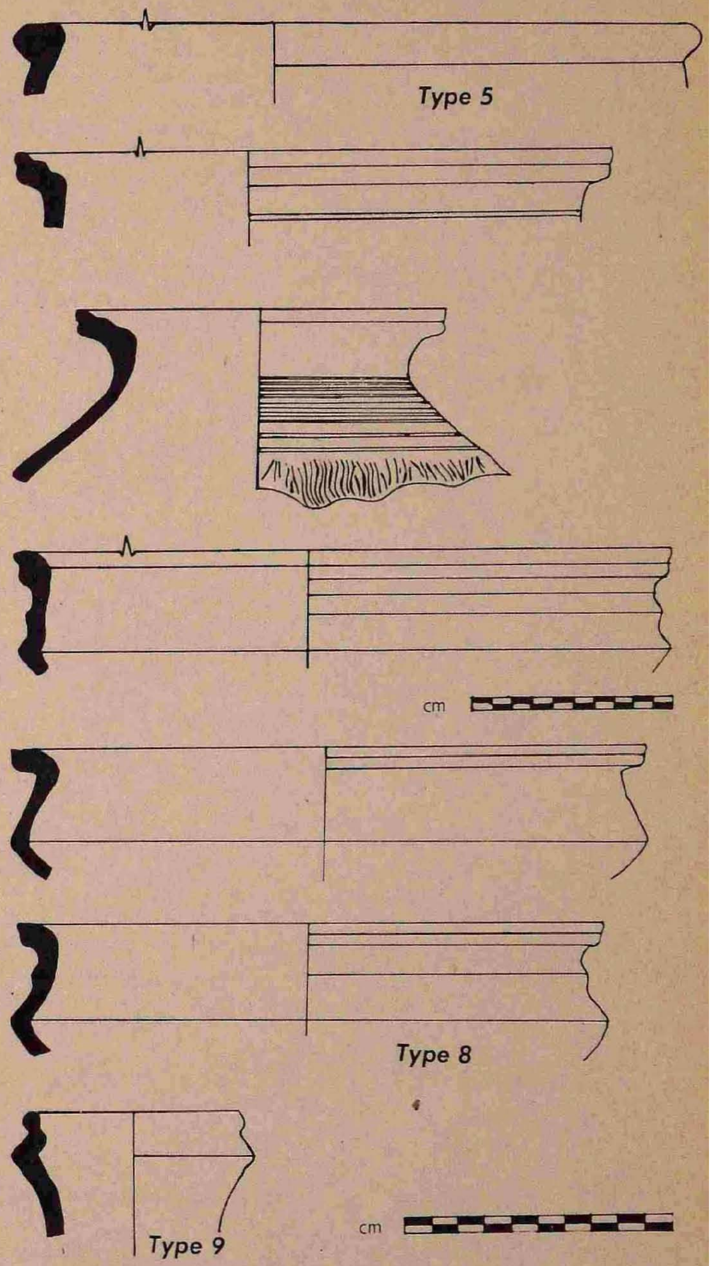
List of pottery types

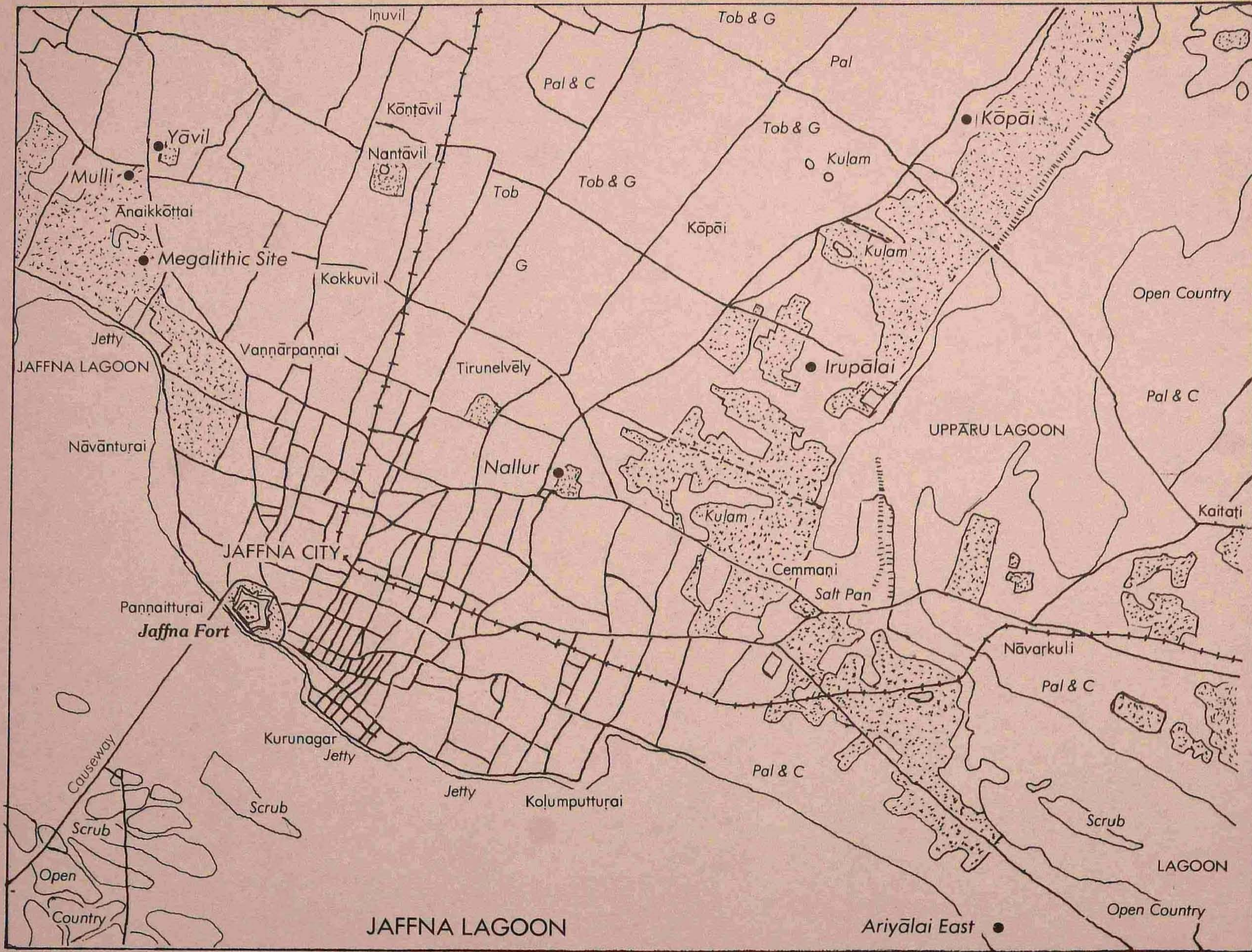
5.3/? /M
8.1/III /M
8.1/IV /M
8.6/III /M
8.6/V /M
9.1/VIII/M

List of other finds

1. Half round tiles
2. Paving bricks

Plate 91 *: Pottery types — Irupalai (from the abandoned kiln site).*





C — Coconut
Pal — Palmyra
G — Vegetable gardens
Tob — Tobacco
Paddy-fields

R.F. 1 : 63360
One Inch = One Mile

Plate 92 : *Irupālai, Kōpāi, Nallūr, Āṉaikkōṭṭai and Ariyālai East — site map.*

Rācamāḷikai — Kōpāi

Latitude :

9° 42′ 25″ N

Longitude :

80° 04′ 12″ N

One inch sheet no :

Jaffna AA 21, 22 A 1, 2

Mosaic sheet no :

A2

Approach :

It lies by the side of the Jaffna—Point Pedro Road at Kōpāi.



Plate 93 : *Sparcely strewn TRRW sherds at Rācamālikai,*

Description :

The whole spot is a mound, with an elevation higher than the neighbouring areas. Successive layers of structural remains were observed. Bricks, limestone slabs and half-round tiles were noticed on the surface. Bricks were found in plenty in heavy concentrations. At present, there are a few modern houses on the site.

Soil :

Alkali and saline.

Water resources :

Wells yield fresh water. There are a few ponds in the surroundings and a flood outlet or a ditch known as *Kōṭṭai Vāikkāl* encircles the mound.

Grazing-land :

Available in the paddy-fields and in the lagoon coast grassland east of the site.

Present cultivation :

Paddy lands are found to the east of the site towards the Uppāṛu lagoon. On the west, vegetable and banana gardens are located.

Availability of building material :

Limestone is available in the red soil area and clay in the Uppāṛu lagoon coast.

Disposition :

The site is in the natural passage that stretches along the Uppāṛu lagoon coast. This passage seems to have later developed as a main trunk route connecting Nallūr and other Valikāmam settlements with Vaṭamarāṭci.

Remarks :

According to historiographical literature and chronicles, Kōpāi was a second capital for the kings of Jaffna where they had a fort and residence. It is only about 5 km from Nallūr, a place known from the Chōla times and which was the capital of the kings of Jaffna till the advent of Portuguese.

The word Kōpāi may possibly render a meaning 'the residence of the king' (*Kō* — king; *Pāi* — mat, also a 'seat' in usage). *Pāi* denoting a place of residence could be a usage in old Jaffna Tamil as we have many place names in Jaffna with the suffix *Pāi*.

The Conquista of Queyroz[49] mentions Kōpāi as a fortress belonging to the Jaffna kings, where king Cankili took refuge when Nallūr was sacked by the Portuguese. Later, Kōpāi also was captured by them.

The site seems to be potential for understanding the origins and collapse of the kingdom of Jaffna. At present, it is heavily overlaid with successive deposits. Only an excavation is likely to reveal the origins of this settlement which may come into the time span of this research.

Records mention the construction of a Portuguese church on the site which was later demolished by the Dutch. Local people refer to the presence of skeletal remains in the site and in the nearby pond.

However, in our survey, we were fortunate enough to collect a few potsherds of Thick Rim Red Ware along the section of the ditch that surrounds the site. This helps to tentatively give the lower date of this site around the beginnings of this millennium, if not earlier.

List of other finds

1. Polished limestone slabs
2. Bricks

List of pottery types

5.2/V/C

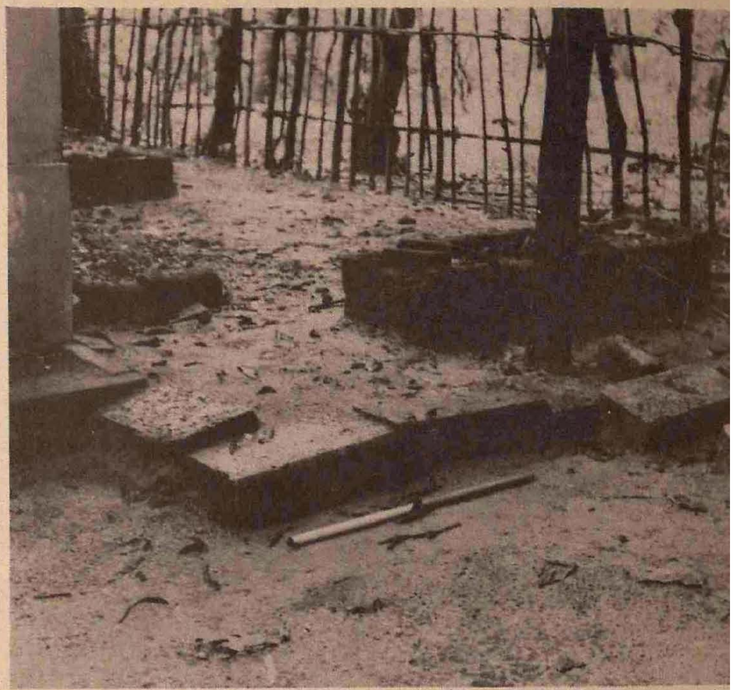
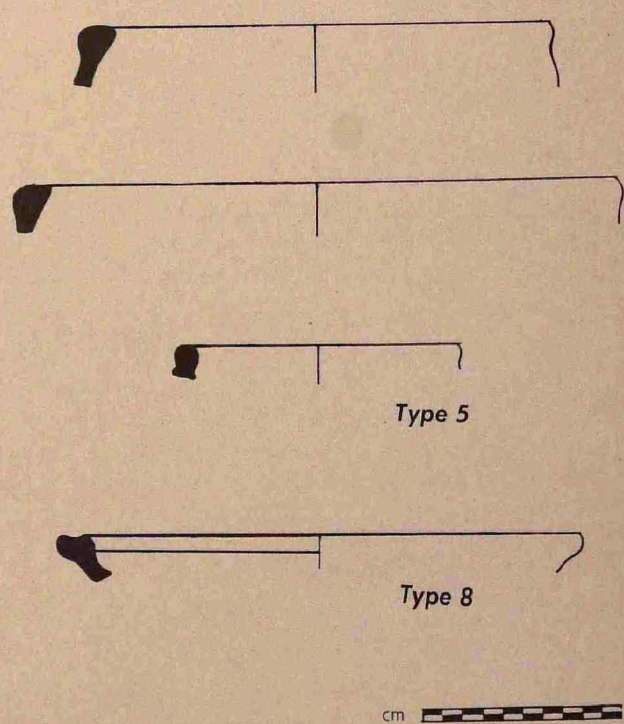


Plate 94 : *Limestone slabs — Rācamālikai, Kōpāi.*
Plate 95 : *Pottery types — Rācamālikai, Kōpāi.*



Kalvaḷai — Mantuvil

Latitude :

9° 43′ 40″ N

Longitude :

80° 12′ 50″ E

One inch sheet no :

Point Pedro AA 23 A3, 4

Mosaic sheet no :

A3

Approach :

The site is adjoining the Kalvaḷai Piḷḷaiyār temple to which a road deviates from the Mantuvil-Caracālai Road, towards Iyattālai.

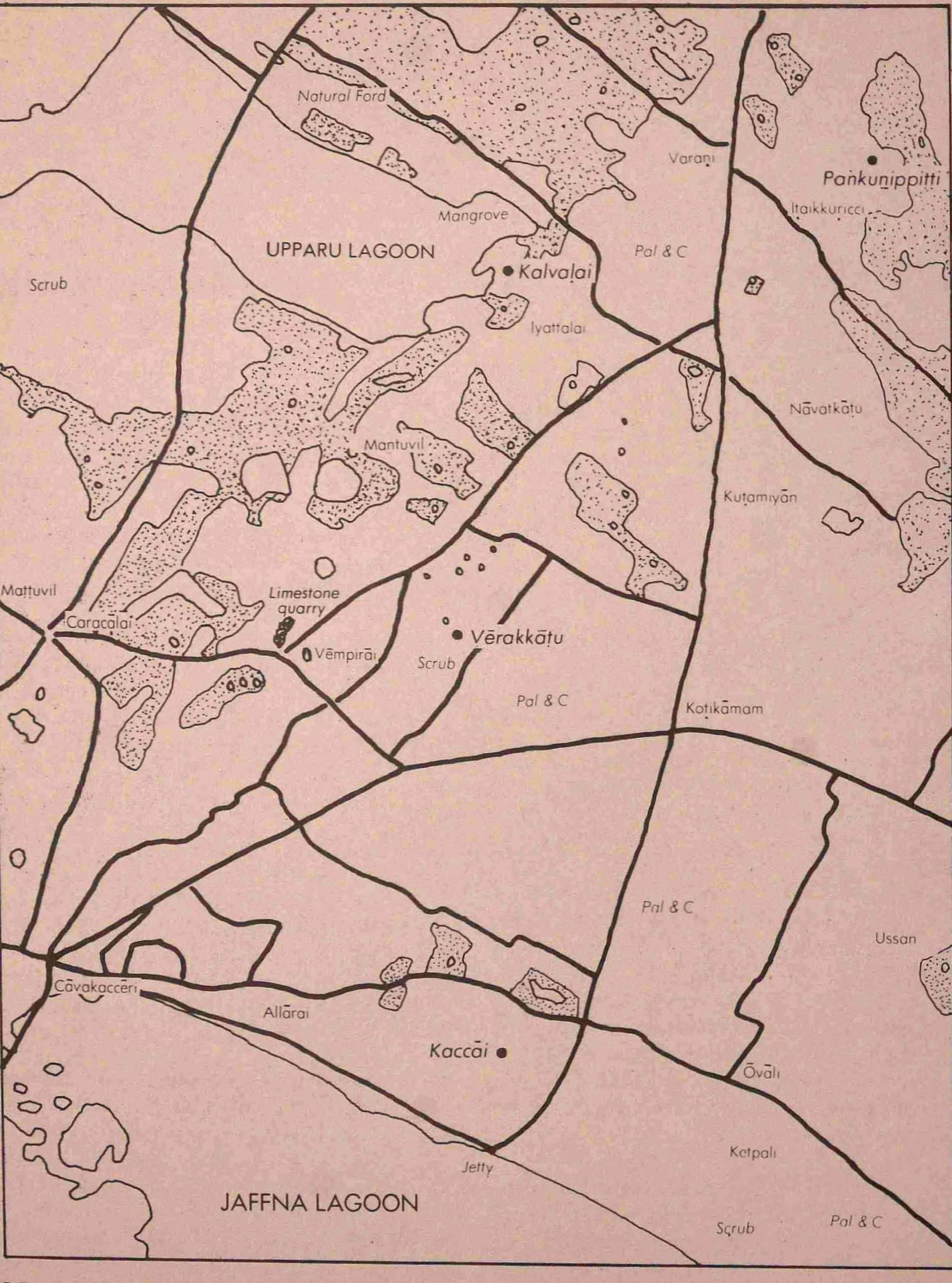
Description :

The site was earlier inspected by Rev. Gnanapirakasar at the beginning of this century.[50] He observed that even in his time people were removing cart loads of bricks from this site. The place is known as Kalvaḷai fort in the local land deeds and in usage. But the One Inch sheets note the place as Tavaḷai. Rev. Gnanapirakasar recorded the place as Talvaḷai. But we tend to give importance to the name Kalvaḷai which is in usage and is more meaningful to the site.

The site is a mound of 15-20 acres, with a dense distribution of structural remains. Large polished limestone slabs and heaps of bricks (15″ × 10″ × 3″) were found to the surface. Half of the site is now under vegetable cultivation. It was reported by farmers, that a broad brick wall encircles the mound. This was confirmed in the subsequent survey in 1984 (the first survey was in 1982), and we observed that the walls roughly make a rectangular enclosure. On the western side, the wall runs along the Uppāṛu lagoon, almost undisturbed and covered by scrub. The relief of the buried wall is prominent on this side. Between the wall and the Lagoon, there are scrub and mangrove. The northern wall is comparatively short in length. In the east, the wall is not traceable now because of the disturbances caused by the cultivators and by the brick-robbers. There is a small elongated pond on the eastern side which was probably a part of the moat or was a source of fresh-water for the residents of the fort. The wall is mostly disturbed on the southern side also. The limestone foundation and a portion of brick lining were noticed in an uncemented section of a large well on this side.

It seems that the main entrance was on the eastern side, in accordance with the tradition of considering east as auspicious for an entrance. This is confirmed by the location of the *Kōṭṭai vāsal Piḷḷaiyār* temple at the eastern periphery of the site, facing east. Besides, the habitable hinterland is also on the east, as the other sides of the fort face the Lagoon and marsh lands.

In 1984, we were fortunate enough to get a hoard of Roman coins from this site which shed some light on the chronology of this unknown, unrecorded fort site. Out of this hoard, only 16 coins reached us. All of them belonged to the 4th century A.D. They were the coins of Constantine, Valentine and Arcadius. A farmer obtained them while burrowing his plot inside the fort. Six of the coins were given to us by Mr. F.P.R. Immanuel, then a student of architecture working in this site and the remaining ten were received from the farmer during our visit.



R.F. 1 : 63360
One Inch = One Mile

Shaded areas indicate paddy fields.

Plate 96 : *Kalvalai, Cankiliyātital, Pankunippitti, Vērakkātu, Kaccāi — site map.*

The site is known for folk worship. The Kōṭṭai Vācal Piḷḷaiyār attracts devotees from far away villages. Besides, inside the fort scrub-forest, there are a number of folk deities. There are folk shrines for *Ayyaṉār, Aṇṇamār, Nāccimār, Muṉi, Vīrabhadraṉ, Ūttaikuṭiyaṉ Kāḷi* (who consumes blood and wine), *Kāḷakaṇṭaṉ* or *Kāḷamāmuṉi* etc. Animal sacrifices are practised even today in these shrines though clandestinely. Also people bring cocks, hens and allow them to wander in the scrub-forest as offerings to their deities. The deities have no images but represented either by stones or by *trisūlas*.

The shrine of Nāccimār has no structure at all. A grove of *Parāi* trees is their dwelling. The grove is fashioned in a way to get a shady space in the centre with an entrance.

The worship of *Aṇṇamār* and *Nāccimār* needs special mention here. Both of them are forms of ancestor worship or warrior-hero worship. *Aṇṇamār* are dead warriors worshipped especially by the present toddy-tappers who were also soldiers earlier. Gnanapirakasar observed that Kalvaḷai *Aṇṇamār* received offerings in plaited palmyra leaf bowels (*piḷā*) which is used for drinking toddy.

Nāccimār, originally the worship of seven maidens, was syncretised in Jaffna with the worship of heroic women who performed *sati* (self immolation after the death of husband).

All these folk evidences found within Kalvalai fort seem to be faint memories of the warrior life of the fort. Presently, the site is considered as a dwelling of innumerable spirits.

Soil :

Grey loam, or alkali and saline.

Water resources :

The groundwater here has a peculiar taste, a mixture of various tastes, saline, sour and acidic. There is a fresh water pond in the eastern side of the mound.

Coastal prospects :

The location is near the Uppāṟu lagoon. It is on the eastern side of the land-bridge or a natural ford that runs across the Uppāṟu lagoon.

Natural vegetation :

Scrub-forest. Palmyra.

Grazing land :

Available in the scrub and in the nearby lagoon side *taravai*.

Present cultivation :

Vegetable gardens.

Availability of building material :

The limestone slabs appear to have come from the other parts of the Peninsula. The bricks found here are of a standard size found in other archaeological sites of the Peninsula. The clay could have been obtained from the Laggon coast alkali.

Disposition :

The site is located in a strategic area that was vital for communication between Valikāmam and other sectors of the Peninsula. The site is in a guarding point of the land-bridge that runs through Uppāṟu and from here it is easy to check movements towards Valikāmam. Jaffna peninsula has four traditional sectors with natural boundaries i.e. Valikāmam, Vaṭamarāṭci, Teṉmarāṭci and Paccilaippaḷḷi. The Kalvaḷai fort site is in the centre. Probably it was a junction from where the routes deviated to the four sectors.

Secondly, the site adjoins Uppāṟu lagoon which would have provided navigation by small boats to enter the Palk Strait at Toṇṭaimāṉāṟu.

Remarks :

The site was not perceived as ruins of a fort earlier. The present survey confirms it as a fort site. Regarding chronology, by the presence of datable Roman coins, the lower date of occupation of the site can be placed to c.4th century A.D., though it might not have been a fort then. Jaffna enjoyed rich trade contacts in Roman times. Because of the communicational potentialities, trade routes might have passed through the site in that time.

The historiographical literature of Jaffna (Yāḻpāṇa Vaipavamālai) mentions of a Cōḻa general Karuṇākara Toṇṭaimāṉ (identified as a general of Kulōtuṅka Cōḻa I (1070-1122), who came to Jaffna and deepended the Uppāṟu lagoon for navigation to

export salt. This was how the Lagoon adjoining the site gained the name Uppāṟu and its mouth at Palk Strait became Toṇṭaimāṉāṟu. Interestingly, we heard a legend at Kalvaḷai, mentioning the construction of the fort by Karuṇākara Toṇṭaimāṉ. It is a reasonable speculation to attribute the origins of the fort to the times of Cōḻa occupation in Jaffna.

12th century Cōḻa inscriptions of the times of Rājādhirāja II (1163-1179 A.D.) list the forts and naval centres of northern Sri Lanka, where battles were fought with the Sri Lankan king Parākramabāhu I. The inscriptions mention Maṭṭival (Maṭṭuvil) as a strategic place along with Ūrātturai (Kayts), Pulaicēri (?) and Mātōṭṭam (Māntai). Maṭṭuvil is now the name of the neighbouring village of Kalvaḷai fort.

According to Portuguese records,[51] in 16th century, after losing the capital Nallūr, Caṅkili, the king of Jaffna fled to Kōpāi, north of Nallūr. When Kōpāi also was sacked, he further fled to a safe place amidst lagoon and mangrove, and proceeded to Vaṉṉi. Both Nallūr and Kōpāi are along the Uppāṟu lagoon. If Caṅkili fled further of Kōpāi, most probably the place was Kalvaḷai fort. The description of the place also tallies. However, by this time the fort might have lost its importance as the Portuguese records did not mention it by name.

The *'Kalvaḷai Antāti'* composed by Nallūr Ciṉṉattampi Pulavar of the Dutch times is said to be attributed to the Kalvaḷai fort piḷḷaiyār temple, though many attribute the literature to another Kalvaḷai piḷḷaiyār in Caṇṭilipāi.[52]

The place name Kalvaḷai has a significant meaning in the context of this site as it means a stone fortress. (*Kal* — stone; *vaḷai* — an encompassed area). The Tamil word *vaḷākam* (campus) derived from *vaḷai* (vaḷaiyakam — vaḷākam). In another current usage *vaḷai* denotes a burrow or hiding place as in the cases of *elivaḷai, muyal vaḷai* etc. (rat hole, rabbit hole). In Jaffna a few more place names are found with this suffix *vaḷai*. Probably, in old Jaffna Tamil usage they denoted encompassed settlements or fenced lands.

The site is in imminent danger of being totally disturbed by the farmers. Preservation should be initiated immediately. We are sure that further studies and excavations will certainly establish the place as an important archaeological site of the Peninsula.

List of pottery types

A large spout ware resembling GRW, with eight spouts was found.

List of other finds :

1. Bricks (size 28 × 20 × 6 cms)
2. 16 Roman coins were found in a hoard. Most of them are of the times of Valentine, Constantine and Arcadius. The coins are yet to be studied in detail.

Caṅkiḷiyātiṭal — Varaṇi

Latitude :

9° 44′ 10″ N

Longitude :

80° 13′ 20″ E

One inch sheet no :

Point Pedro A^A 23, A3, 4

Mosaic sheet no :

A3

Approach :

The site is in Varaṇi along the Varaṇi-Koṭikāmam Road.

Description :

The area is a mound of considerable height, one side facing the paddy-fields and part of the Uppaṟu lagoon, (Tampaṉai Kaṭal), and the other side facing the Varaṇi-Koṭikāmam road. A scant distribution of Grooved Rim ware sherds was noticed in the site.

Soil :

Alkali and saline (grey loam).

Water resources :

Wells yield moderately saline-free water even in summer.

Coastal prospects :

The Tampaṉai Kaṭal lagoon is in the vicinity. The lands reclaimed from the Lagoon are under paddy cultivation.

Grazing-land :

Taravai grasslands are used for grazing.

Present cultivation :

Paddy.

Disposition :

The site is located in the patch of land that is a land-bridge acorss the Uppāṟu lagoon.[53]

Remarks :

The site was earlier recorded by Rev. Gnanapirakasar.[54] The date of the site, indicated by the pottery falls outside our scope, but the report is included as the site is situated on an early communication line of the Peninsula, discussed in the thesis.[55]

List of pottery types :

8.1/III/M
8.3/? /M

Paṅkuṉippiṭṭi — Varaṇi

Latitude :

9° 44' 00" N

Longitude :

80° 14' 10" E

One inch sheet no :

Point Pedro A^A 23 A3 4

Mosaic sheet no :

A3

Approach :

The site is located adjoining the paddy fields east of the Varaṇi church.

Description :

It is a mound site, covered by palmyra and scrub. Structural remains like tiles, bricks and stones were noticed in an acre of land.

Soil :

Alkali and saline.

Water resources :

Moderately saline-free water is available in the paddy-fields.

Coastal prospects :

The Vaṭamarāṭci lagoon is nearby.

Natural vegetation :

Palmyra and scrub.

Grazing-land :

Paddy-fields provide grazing-land.

Present cultivation :

Paddy in a small stretch of land.

Disposition :

The location could have been on the wayside of a route that connected Tenmarāṭci with Vaṭamarāṭci. Probably there was an old ford nearby to cross the Lagoon.

Remarks :

Structural remains found in the site could not give any clue to its nature. The tiles found here were of the grooved type, but stylistically evolved from the other grooved tiles we found in the rest of the early sites. Tentatively the site could be assigned to the early centuries of this millennium. This site was visited and recorded by Rev. Gnanapirakasar.[56]

List of other finds :

1. Tiles



Plate 97 : *Fort site, Kaccāi.*

Vērakkāṭu

Latitude :

9° 41′ 20″ N

Longitude :

80° 11′ 55″ E

One inch sheet no :

Point Pedro A^A 23 A3 4

Mosaic sheet no :

A3

Approach :

Between Mantuvil and Mīcālai, it is marked in the One Inch sheet as *Vēratiṭal* (mounds).

Description :

The area is of high sand-dunes, covered by scrub. A new housing scheme is coming up in this site. Very sparse distribution of Thick Rim Red Ware and Grooved Rim Ware sherds was noticed.

Soil :

Dune-sand. The sand dune formation in Jaffna is a result of the accumulation of sand brought by the sea currents from the river deltas of the east coast of India. The Vaṭamarāṭci sand bar, where even now sand accumulates is geologically a recent formation. The Vēratiṭal dune sand site is in the interior of the Peninsula, west of the Toṇṭaimāṉāṟu lagoon. Hence the formation of these dunes must be earlier than that of the Vaṭamarāṭci and must be earlier than the formation of Vaṭamarāṭci-Paccilaippaḷḷi sand bar and the Toṇṭaimāṉāṟu lagoon.

Fresh water resources :

The wells are moderately free from salinity.

Coastal prospects :

Nil. Should come either to Kaccāi or to Cāvakaccēri for coastal outlet.

Natural vegetation :

Scrub and palmyra. The scrub in these areas is generally known as *alampal*. This natural vegetation grows as a bush. When dry, the sticks and twigs of the bush are used to make wattle fences in contrast to the coralstone *pakir* fences of the islands off Jaffna and coastal areas. The use of *alampal* is a localised practice confined to Vaṭamarāṭci, Paccilaippalli and parts of Teṉmarāṭci areas in the Peninsula and in Vaṉṉi. *Kiñña alampal* is a popular variety used for this purpose.

Present cultivation :

Nil.

Grazing-land :

Scrub provides fodder.

Disposition :

The site could have been located in the communication line between Vaṭamarāṭci and Teṉmarāṭci.

Remarks :

The site was inspected and recorded by Rev. Gnanapirakasar.[57] The local legends describe this place as a ruined palace complex. Our pottery analysis dates this site to the times of the

The place name Verakkāṭu derived from an economically important natural vegetation, *chāya* root (*Vēr* — *chāya* root).

Kaccāi

Latitude :

9° 39′ 9″ N

Longitude :

80° 12′ 10″ E

One inch sheet no :

Point Pedro AA 23 A3, 4

Mosaic sheet no :

A3

Approach :

The site is between the Kaccāi Junction and the Kaccāi Jetty.

Description :

This is a mound site consisting of structural remains, where bricks and Grooved Rim Ware pottery were found in an area of around 5 acres.

The site is known by several names : Muṉiyaṉkāṭu, Kōṭṭaipiṭṭi, Pātiritōṭṭam etc.

Soil :

Grey loam or alkali and saline.

Water resources :

Wells provide moderately saline-free water.

Coastal prospects :

The site is near the Kaccāi Jetty. According to a literary source, Kaccāi was an important naval centre and was a port during the times of the kingdom of Jaffna.[58] The importance of Kaccāi continued up to British times, for it was a convenient port for the people of Teṉmarāṭci and Vaṭamarāṭci to get to the mainland across the Lagoon to reach Pūnakari. Kaccāi became a ghost port after the advent of the Kērativu ferry. Now it is only a small fishing centre.

Natural vegetation :

Palmyra and scrub.

Grazing-land :

Scrub-land is used for grazing.

Present cultivation :

Presently the whole site is under vegetable cultivation.

Disposition :

As described earlier, the site was in a strategic position for the settlements of Teṉmarāṭci, and Vaṭamarāṭci to communicate with the mainland in the south.

Remarks :

There are many legends relating to this site, associating it with the Tamil kings, the Portuguese and the Dutch. The remains on the surface belong to a later period, may be the times of the Europeans. But there is a possibility of finding earlier remains underneath, as the site is mentioned in the works of the Tamil kings of Jaffna.[58]

List of pottery types :

5.2/V/C
8.3/? /M

Āṉaikkōṭṭai (Excavation)



Plate 98 : *Potsherds including ECBRW sherds and cattle remains found in situ in the unrecorded trench that was hurriedly probed while the earth was being scooped at Āṉaikkōṭṭai. Whether it was a sacrifice or an animal burial could not be confirmed in this rescue operation. Sacrificing an oxen or buffaloe in connection with a Megalithic burial had been recorded in Northeastern India and in Southeast Asia. Sacrificing a chicken in the crematorium for those who died on certain days of a week is still common in Jaffna.*

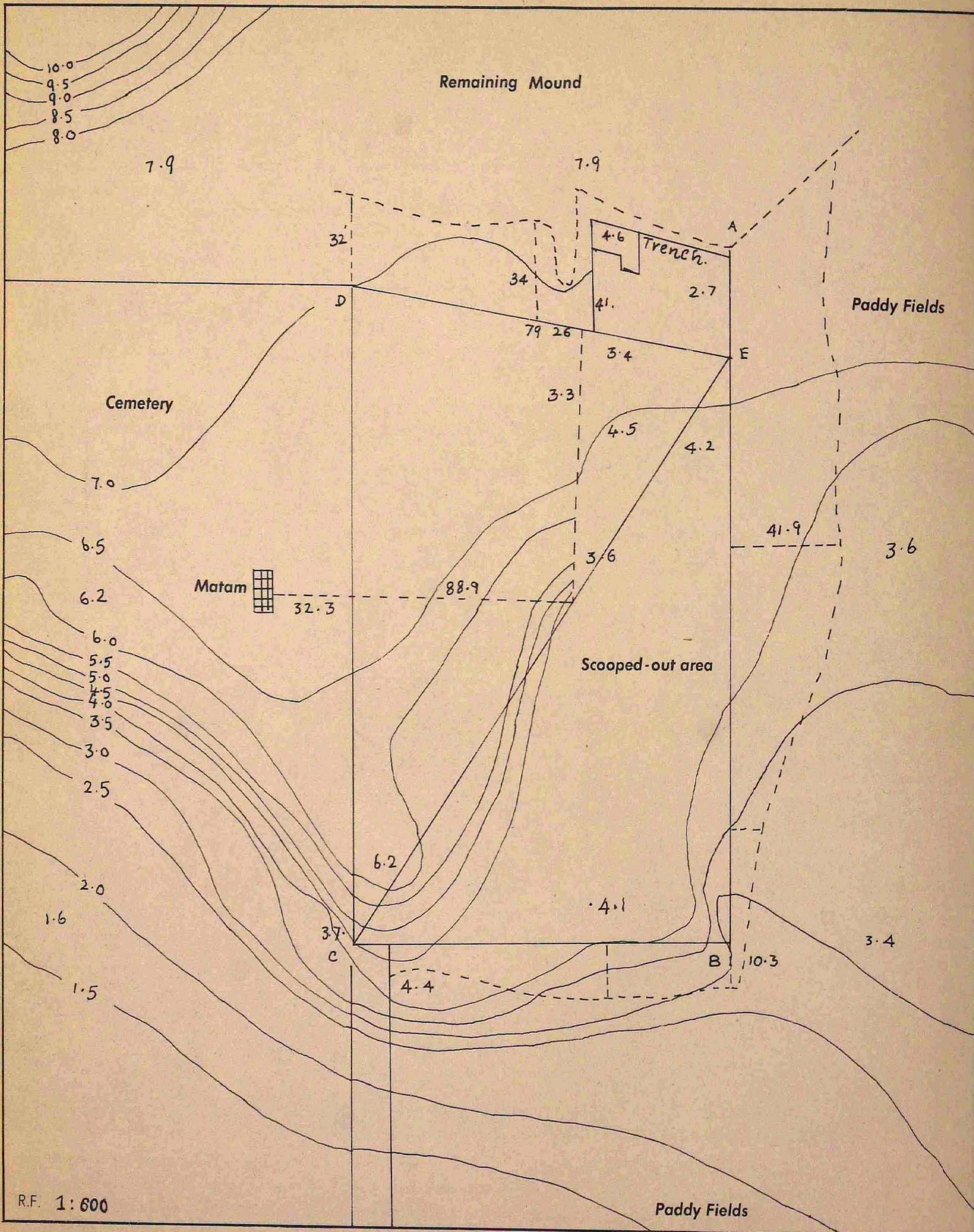


Plate 99 : *Survey map indicating the scooped-out portion and the trench at the Megalithic burial mound (Karaiyāmpiṭṭi mound) Āṉaikkōṭṭai.*

Introduction :

The Āṉaikkōṭṭai Megalithic mound was in imminent danger from earth scoopers at the time of its discovery.[59] Hence, a rescue excavation was organised by the Department of History, University of Jaffna. This was financed by a special research grant from the University of Jaffna and was conducted by three of us, Prof. K. Indrapala (Director), Dr. S.K. Sitrampalam and the Author. Staff, students and a few past students of the various departments of the University of Jaffna took part in the excavation. The work was conducted for 7 days in two spells, from 6-12-1980 to 8-12-1980 and from 13-12-1980 to 16-12-1980.

Mr. S. Krishnarajah and Mr. V.P. Sivanathan, staff of the Dept. of History, and the Dept. of Economics have taken the photographs of the excavation. Mr. R. Ceran of the Faculty of Science has prepared the drawings of pottery and other finds. Surveying and levelling of the site were done by a team of staff members from the Department of Geography. Mr. A. Kanapathipillai and Mr. S.B. Rajeswaran were responsible for the survey and for the preparation of the site map.

The lay out of the trenches :

Three spots of the disturbed mound were selected for the trenches. One was abandoned as we found it totally disturbed by the earth scoopers. Another, which was partially disturbed was hurridly dug, as it was being scooped out to fill up the Navanturai reclamation project.[60] Traces of animal bones were found here in association with the Megalithic pottery. This pit could not be recorded systematically because of the pace of scooping for the Government reclamation project.

The trench which was comparatively better recorded was laid adjoining the wall of the remaining mound so that it could yield a full stratigraphical section of the mound in relation to the implementiferous layers. This trench was originally 7′ × 13′ in size and was extended later.[61]

Stratigraphy :

The trench as mentioned earlier was dug facing a section of the already dug-out portion of the mound. This was recorded as the western section of the trench. Three layers had already been exposed in this section by the earth scoopers.

Plate 100 : *Western and southern sections of the trench where burials Sk_1 and Sk_2 were found.*



Layers I and II were non-implementiferous. Layer I was a conglomeration of oyster, conch, snail shells and coral stones. This layer was probably formed while the cultivators deepened the adjoining fields and heaped the dug-out earth. Such practice is still seen on the site.

Layer II was of wind-deposited yellow sand. This could have been the original covering layer when the site was abandoned.

Layer III and layer IV were implementiferous. Initially they were recorded as 3A and 3B, as we could not find any visible signs to differentiate them. But later the colour photographs of the section helped to draw the differentiating line. The photographs made it clear that the burials, Sk_1 and Sk_2 were positioned in two different layers, Sk_1 preceding Sk_2 chronologically. In this report we equate layer III and layer IV with 3A and 3B respectively. Layer V was of virgin soil.



Plate 101 : *Western section of the trench — stratigraphy. I. shell cum limestone rubble; II. wind-blown sand; III. implementeferous silt in which burial Sk_2 was found; IV. implementeferous dark brown silt in which burial Sk_1 was found; V. 'Makki' — virgin soil.*

The burials :

The Burial Sk_1 was found in the layer IV immediately beneath an arranged heap of grooved tiles. These grooved tiles were piled one upon the other in an orderly fashion.

The Burial was an extended inhumation oriented west to east and the skeleton was around 5' in height. The hands were found folded in the front. The skull was damaged because of a palmyra root that ran through the eye socket.

Remains of a variety of burial offerings were found placed around the skeleton. There were crab shells, edible oyster shells, edible conch shells which had been broken open to extract the flesh, turtle shells, various kinds of fish vertebrae and animal bones, obviously remains of the food items that were offered to the deceased.

The containers of these offerings were Early Carinated Black and Red Ware dishes and bowls, other Black and Red Wares, Early Red Ware pots etc. A few sherds were found with graffiti marks.

Numerous fish bone-points with their natural needle eyes and polished shark vertebrae were found along with the burial. Some of them were



Plate 102 : *Burial Sk_1*

found around the neck of the skeleton. Probably they were used as ornaments.

Many unopened conch shells were also found around the skeleton and in a cluster near the feet signifying the burial customs.[62]

Iron slags and an iron point were the other objects found along with the burial.

The most interesting find of the excavation was inside an ECBRW dish placed near the skull of the skeleton. This was a bronze seal of two lines, presumably with two types of writing. In the first line there are three graffiti marks usually found in Megalithic pottery and in the second line there are three Brahmi scripts datable to third or second century B.C.[63] This seal could be a part of a signet ring as we found fragments of a circular bronze strap in the same dish.



Plate 103 : *A bronze seal, probably the front piece of a signet ring, found in an ECBRW dish placed near the skull of the burial Sk_1.*

The other burial Sk2, was of the same orientation parallel to Sk1, and was laid south of it. This was slightly shorter than Sk1, measuring around 4′ 9″. This skeleton was observed in the layer III which is a later layer than the layer IV from which Sk1 was obtained. The burial was found in a bed of oyster shells.

The burial pottery and the offerings were similar to that of burial Sk1. However, there are certain special features : Rouletted Ware sherds ; a Lakshmi plaque coin found near the feet of the skeleton ; fragments of an iron dagger and an iron lamp ; paste and carnelian beads.

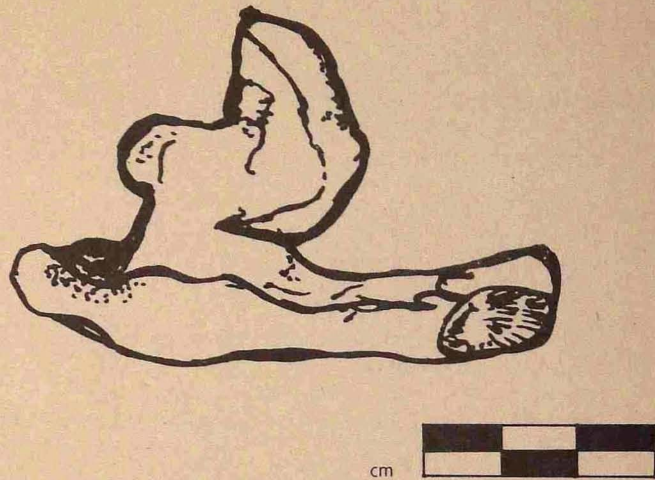
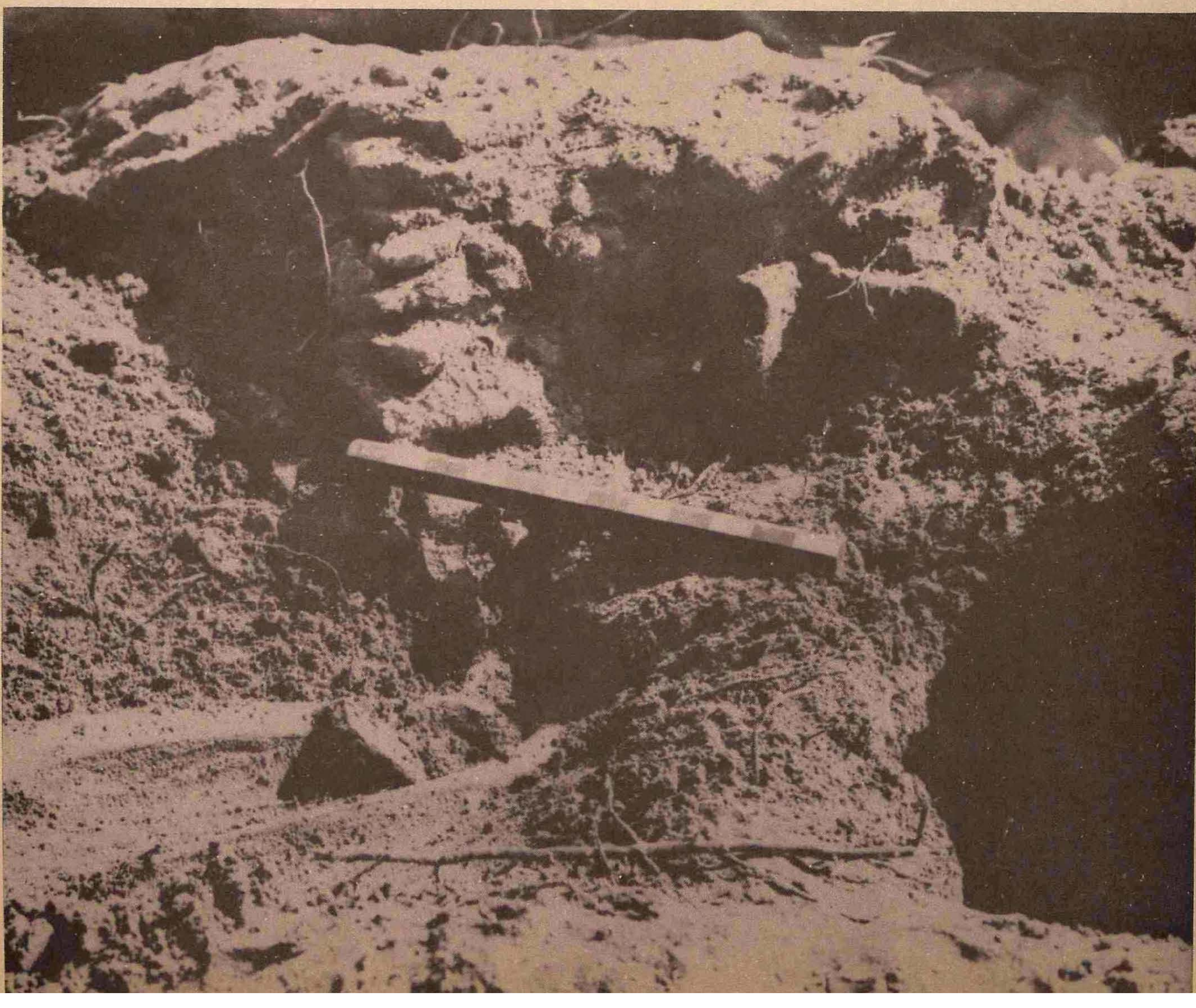


***Plate 104** : An iron lamp found with burial Sk_2. The lamp, in the shape of an 'akal viḷakku' with a nob on the top, seems to have had a lower pedestal which disintegrated. The lamp was seen placed on a bed of oyster shells, the impressions of which were found in the rusted bottom.*

***Plate 105** : 12-15 layers of grooved tiles were found heaped in an arranged manner above the burial Sk_1. Seen in the photograph is the section of the tile-layers just above the legs of the burial.*



Excavation remarks :

The culture unveiled at the Āṉaikkōṭṭai-Karaiyāmpiṭṭi mound has been identified as Megalithic by this rescue excavation. This culture was essentially a south Indian phenomenon.[64] Recent researches point out that the entire Island of Sri Lanka was under the influence of this culture.[65] The current understanding is that during protohistoric times the Megalithic culture was a common cultural stratum both in south India and in Sri Lanka, and this culture was responsible for the dawn of history in both these regions.

The Āṉaikkōṭṭai megalithic culture was identified on the strength of the following criteria, common to the various types of Megalithic burials found in south India and in Sri Lanka :

1. The practice of ceremonial burial.
2. The Megalithic Black and Red pottery.
3. The nature of the burial offerings.
4. Evidences of iron technology and iron tools.
5. The Megalithic graffiti on the pottery.

The specific type of the surface features of these Megalithic burials could not be determined in our rescue excavation as the top layers were already disturbed. They were only extended inhumations. There is a probability that the 10-12 layers of tiles heaped in arrangement above the burial Sk_1 itself could be a Megalithic burial feature. This burial belonged to someone important, as indicated by the royal seal found amidst the offerings. Hence, a unique feature like arranged tiles might have marked his burial. It should be noted that the Megalithic burial features vary, though they retain common characteristics like the concept of burial, offerings, pottery, the presence of iron etc.

Another burial feature found at Āṉaikkōṭṭai (during the exploration on 29-11-1980) was a partially damaged large urn, containing small ECBRW sherds, conch shells, aquatic food remains and bones. The urn was found at a spot about 3 meters east from the rescue pit. This was in the same disturbed layer. On another recent visit to the site, (January 1983) we noticed fairly big boulders placed around skeletal remains in a freshly disturbed spot near our rescue pit. Boulders were occasionally noticed in the disturbed sector of the mound. The material of some of

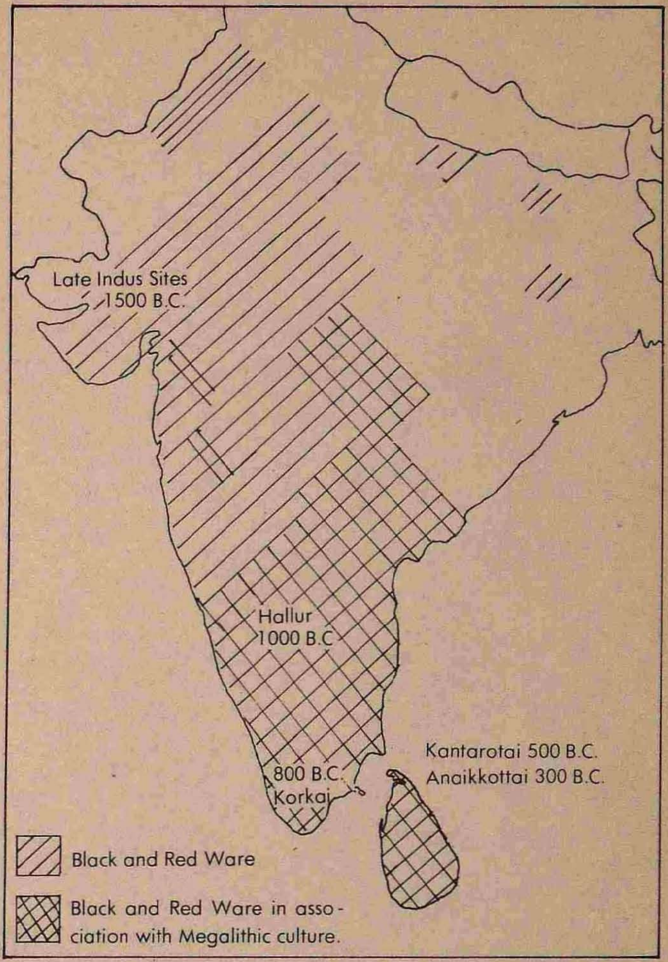


Plate 106 : *Black and Red Ware and Megalithic culture — distribution pattern. (Modified after Vimala Sahney 1965).*

these boulders is alien to the Peninsula, while that of the remaining are local limestones.

On the basis of these observations, the prevalence of the following types of Megalithic burials at the Āṉaikkōṭṭai mound could be envisaged :

1. Extended inhumation, without surfacial features.
2. Extended inhumation with heap of tiles.
3. Urn burial.
4. Stone circle.
5. A single boulder like a hood-stone.

Concerning the chronology, the burials excavated can be dated between 3rd century B.C. and the dawn of the Christian era. The first burial can be assigned to 3rd or 2nd century B.C. on the strength of the palaeography of the seal found near the skull of Sk_1[66]. The second burial is a later one



Plate 107 : *The waters around Jaffna yield good quality conch shells. Until recent times it was a major export item from Jaffna to various countries. The conch found its way into the 'life style' of the people since early times. The meat inside the live conch is a food. The shell is used to produce bangles, other ornaments and to feed infants. It is also a sacred object of ritualistic value. With a hole drilled on the top, it is blown to make a loud sound, which is considered auspicious. It is blown both in temples as well as in funerals. Besides its use in the temple ceremonies, it is fixed in the thresholds and in the steps as an object of good omen. The ritual character of conch shells can be traced back to Megalithic times since they were found placed near the feet of burial* Sk_1, *in a ceremonial way.*

and can be assigned to the dawn of the Christian era as it yielded Rouletted Ware. At present our dating of the burials solely depends on a relative methodology based on palaeography and pottery typology which is subject to revision.

These tentative dates, arrived at for the Āṉaikkōṭṭai Megalithic burials, tend to fall into the beginnings of early historic period and not protohistoric in the South Asian context of periodisation.[67] Hence, considering the milieu of Megalithic culture in South India, a term 'late Megalithic' may be preferred for these burials, even though, in the context of Jaffna, they probably mark the existence of a protohistoric phase.[68]

The Āṉaikkōṭṭai burial mound alone seems to have had a time span of at least 600 years as indicated by two available strands of palaeographical evidences ranging from the 3rd century B.C. to the 3rd century A.D.[69] The possibility of finding still older burials in this mound cannot be ruled out since at Kantarōṭai the C_{14} dates for this cultural phase go back to 500 B.C.[70] which is obviously protohistoric.

The significance of Megalithic culture in the context of the History of Jaffna and the settlement and subsistence pattern analysis are discussed elsewhere in this thesis.[71]

The decipherment of the Āṉaikkōṭṭai seal by Prof. K. Indrapala and the author's opinion on the seal legend are given in the appendix II.

The formation of the Āṉaikkōṭṭai mounds :

The landscape of the Āṉaikkōṭṭai site is something peculiar to the Peninsula. At present, the whole area is under paddy cultivation and the paddy fields are dotted with high mounds. Many of these mounds are now fast vanishing because of the rise in demand for earth as fillup in the nearby city.

The stratigraphical observations made by us in the partially disturbed mounds and the section of the Āṉaikkōṭṭai rescue pit, help us to form an idea of the formation of these mounds.

At the burial mound, the skeleton and the burial offerings were observed mostly lying on or slightly above an oyster shell cum silt layer. The burials were overlaid by 2′-3′ wind blown non-implementiferous loose earth.

These layers are usual phenomena in the land that emerged by the retreat of lagoon. The oyster shell cum silt layer marks the former lagoon bed. The loose silt and the covering sand denotes the action of the wind of the lagoon had receded.

The Megalithic burials would have taken place when the surface of the then landscape was the wind-blown silt. The burial practice continued for a few centuries before the site was abandoned. After several centuries the paddy cultivators reclaimed the lands. They deepened the fields to allow more rain water to be collected. The scooped out earth — especially the unwanted coral boulders and the shells — was heaped on certain spots and in this manner the artificial mounds arose in the paddy fields. For heaping they must have selected comparatively higher spots, already existing. Likewise, the spot of the Megalithic burials, was selected to heap the dump, and thus the burial stratum was preserved until the arrival of the recent earth scoopers.

There are some mounds in the area which contain only the heaped earth of shell remains and coral from top to bottom. They seem to be completely manmade. There are some other mounds, again manmade, with disturbed artifacts and bone remains in all the layers.

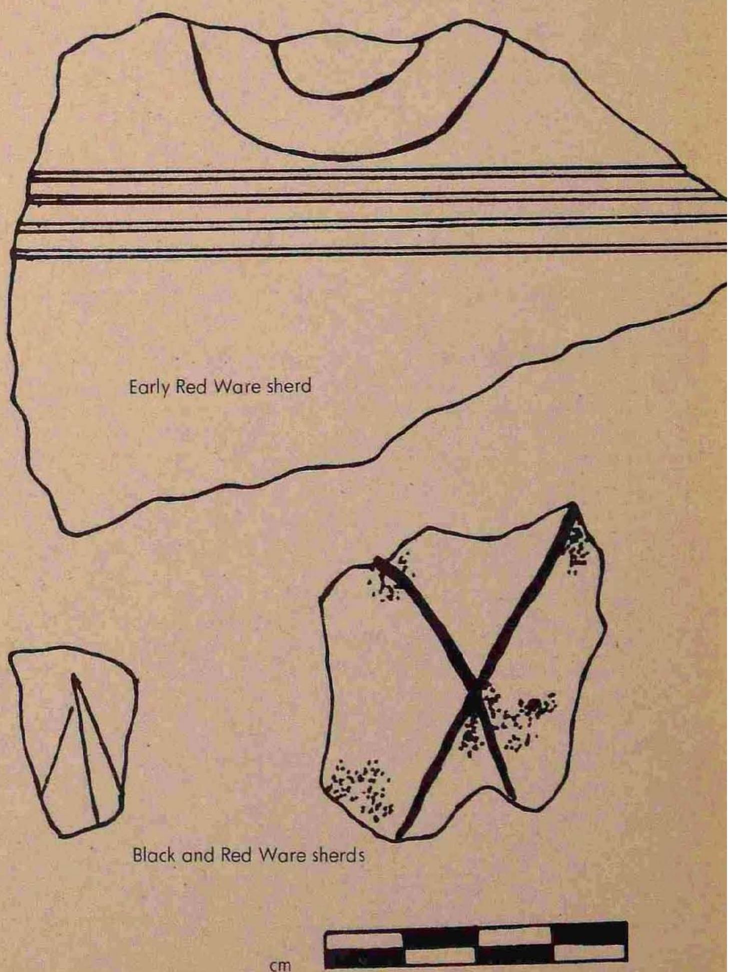
List of pottery types

1.1/I /M
1.1/II /M
2.1/III/M
2.1/III/C
3.1/III/M
3.2/III/M
4.1/? /F
4.5/? /F
5 1/III/M

Graffiti marks were found in the BRW and Early Red Ware body sherds.

Types 4.1, 4.5 and 5.1 were not obtained along with Sk$_1$. They were found in the burial Sk$_2$.

***Plate 108** : Graffiti marks on potsherds — Āṉaikkōṭṭai excavation finds.*



List of Finds

	From the Disturbed surface	From the excavation pit
1. Bone Objects		
a. Bone points	3	—
b. Vertebrae bones (animal)	—	153
c. Vertebrae bones (shark and other scoliodons)	—	66
d. Vertebrae bones with projecting points (both fish and animal)	—	52
e. Fish bones	3	54
f. Cat fish jaw bones	4	—
g. Turtle shell fragments	1	11
h. Crab shell fragments	2	7
i. Bone beads? (unpolished)	—	3
j. Bone beads? (polished)	—	4
k. Bone fragments (animals and birds)	251	512
l. Animal teeth	1	19
m. Shell fragments	—	7
n. Conch shells	Innumerable	10
o. Oyster shells	Innumerable	
2. Stone Objects		
a. Rubbing stones or pestle stones	4	—
b. Sling stone	1	—
3. Metal Objects		
I. Copper		
a. Rod — resembles an ancient hairpin	1	—
b. Bent strap (fragment)	—	1
c. A bronze seal (see appendix II, Burial Sk_1)	—	1
d. A Lakshmi plaque coin (Burial Sk_2)	—	1
e. A Roman coin (legend not clear)	1	—
II. Iron		
a. Daggers	2	1
b. Small iron points	2	1
c. Spear heads	3	—
d. Other iron tools	6	—
e. Iron slags	25	5
f. Iron lamp (*Akal viḷakku*)	—	1
4. Other Objects		
a. Charcoal lumps	2	6
b. Paste beads	5	3
c. Terracotta disc	—	1

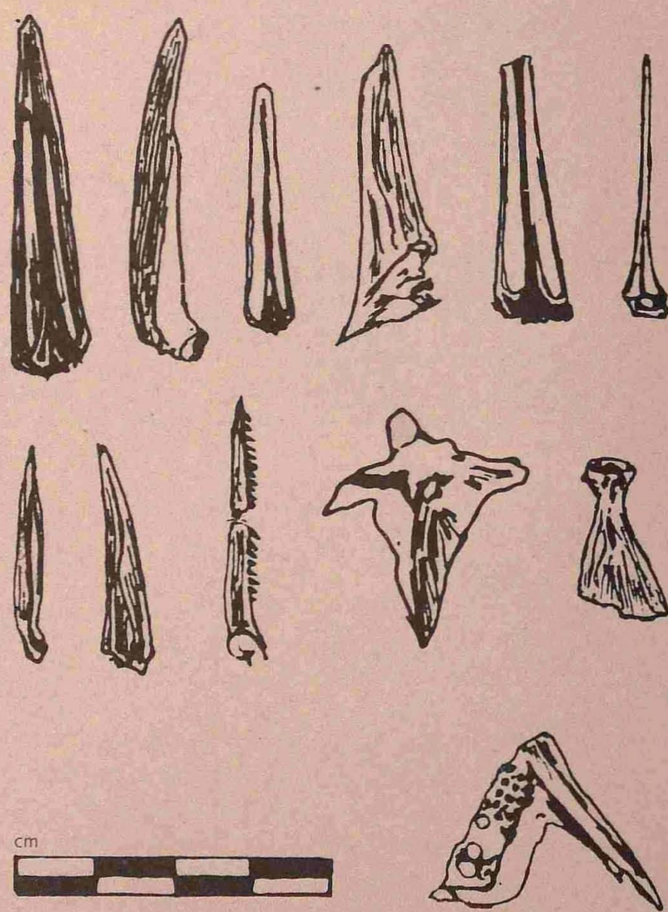


Plate 109 : *Bone objects — Āṉaikkōṭṭai excavation finds.*

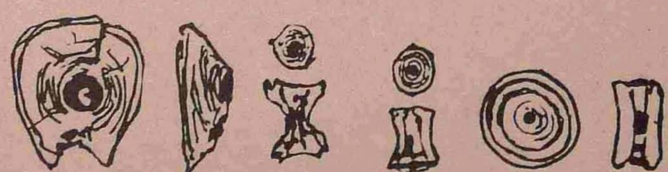


Plate 110 : *Conch shells broke-opened to extract the meat — Āṉaikkōṭṭai excavation finds.*

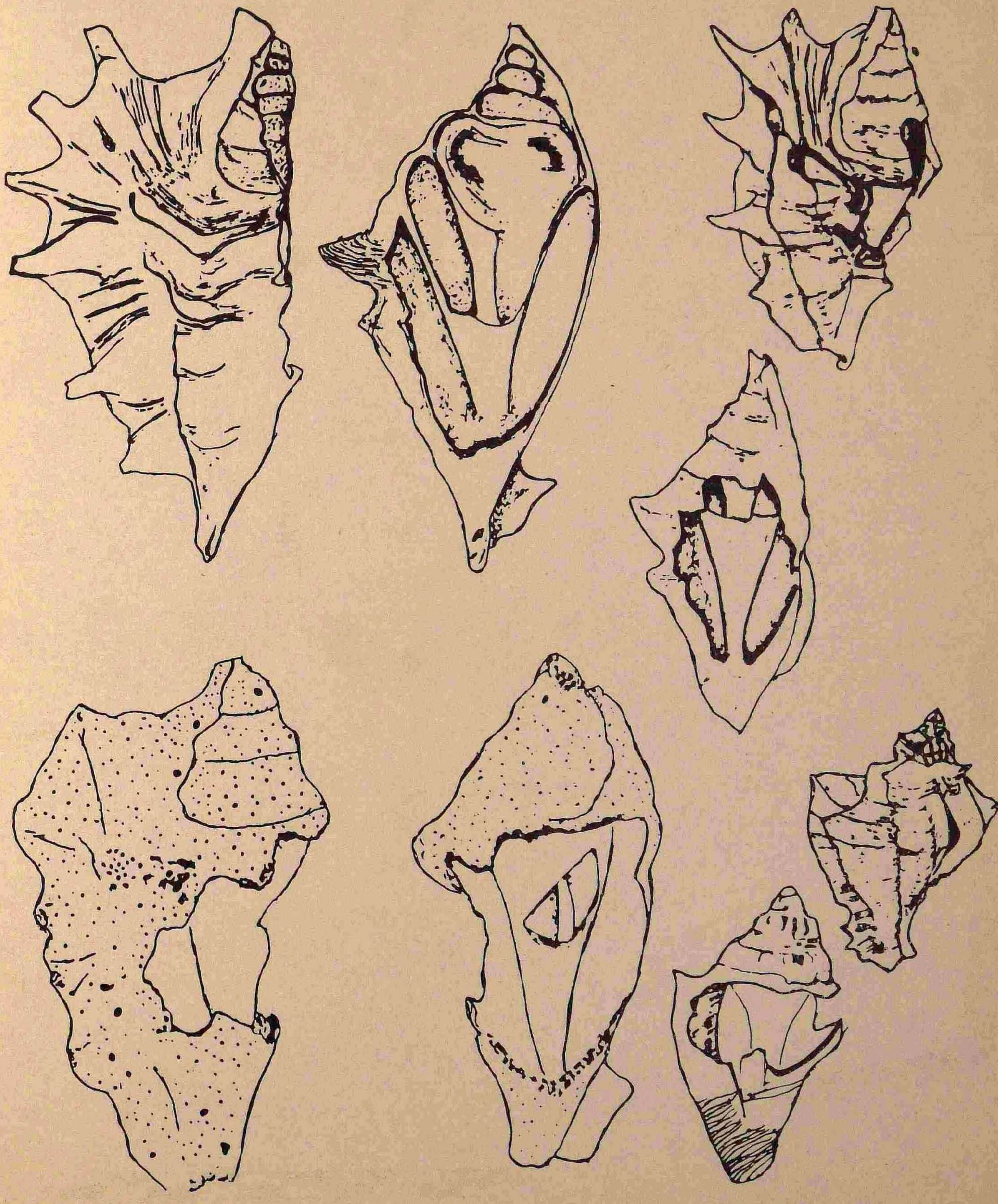
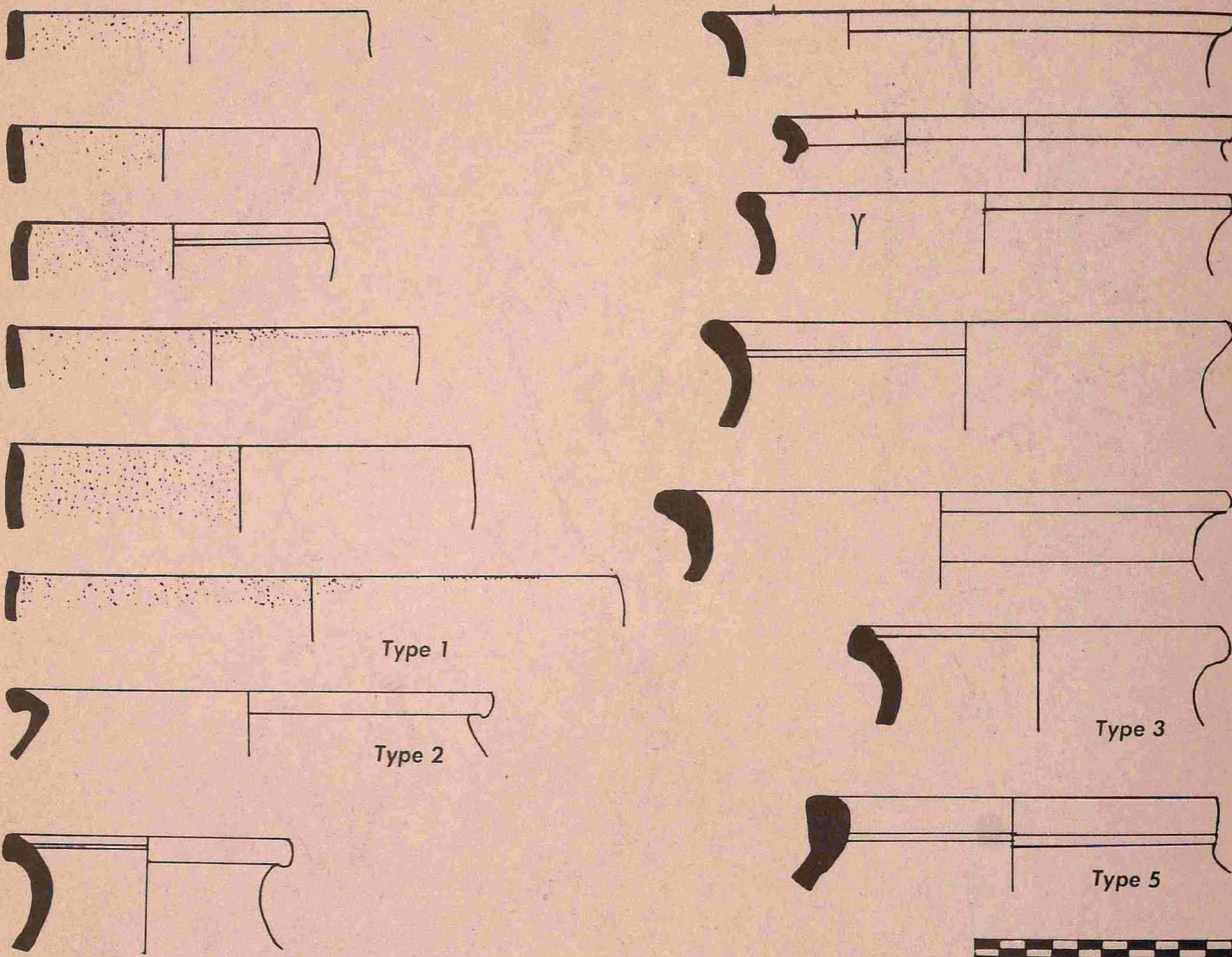
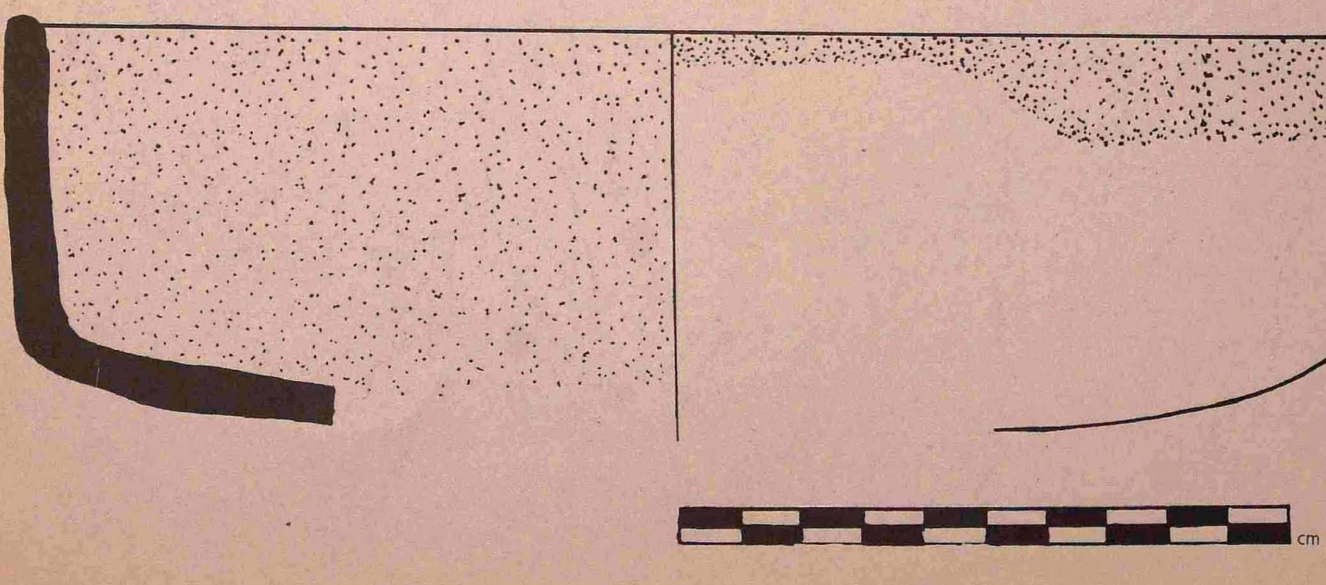


Plate 111 : *Pottery types — Āṉaikkōṭṭai (excavation).*



The ECBRW dish placed near the skull of burial Sk_1, in which the bronze seal was found.



Cattirantai — Kārainagar (Excavation)

Plate 112 : *trench B, Kārainagar.*



Introduction :

The Cattirantai excavation was in fact, a rescue operation, as the trenches were dug in haste and without proper facilities, while earth-scooping was going on in the dunes.[72].

Two pits were dug in a plot belonging to Mr.Kandasamy, one in January 1981 and the other in October 1981 with the guidance of Prof. K. Indrapala. On both occasions the digging was conducted with the help of the members of our Archaeological survey team.

The aim of the rescue work was just to determine the nature and the potentialities of the site before the evidences were destroyed for ever.

The trenches and the stratigraphy :

The rescue pits are referred to here as "A" (January 1981) and "B" (October 1981). Both of them were dug at the spots where already the top earth had been removed by the sand-scoopers.

Pit A was 10′ × 10′ in size and it was laid at the north-western corner of the premises of Mr. Kandasamy. When we started the dig, we were nearly 5′ lower than the top of the mound, and about 3′ higher than the level of the neighbouring paddy fields.

The layers already scooped-out by the sand-scoopers at this spot were non-implementiferous, except for occasional bones without any association. Thus, the situation was favourable for us to dig the implementiferous layer *in situ*.

The stratigraphy could not be clearly recorded because of the rescue nature of the excavation. The soil of the mound was of hard clay corresponding to the soil of the neighbouring fields. In the trench A, from the surface where we started the dig, three layers were observed.

The soil of the layer I was comparatively loose and light in colour. This layer had a fragment of a skull without any association. This layer was observed only in the eastern section of the trench.

Layer II was the implementiferous layer of around 2′ thick, and here we found the skeletal remains, with associated burial offerings. Layer III was the virgin layer of white coral stones. The burial was immediately above this natural coral stone layer.



***Plate 113** : Stratigraphy — trench A, Cattirantai, Kārai-nagar : 1. Light-brown silt, sterile. 2. Dark-brown silt in which the Megalithic burials were found. 3. Coral bed-rock.*

Pit B, which we laid in October 1981 was on the southern side of the premises, between the house and the fence. Even this trench was laid in a place where the top earth had already been removed.

The surface of the trench, when we started the dig, was around 4′ from the top of the mound, and it was dug to another 4′ till we reached the coral stone layer. The excavation was less

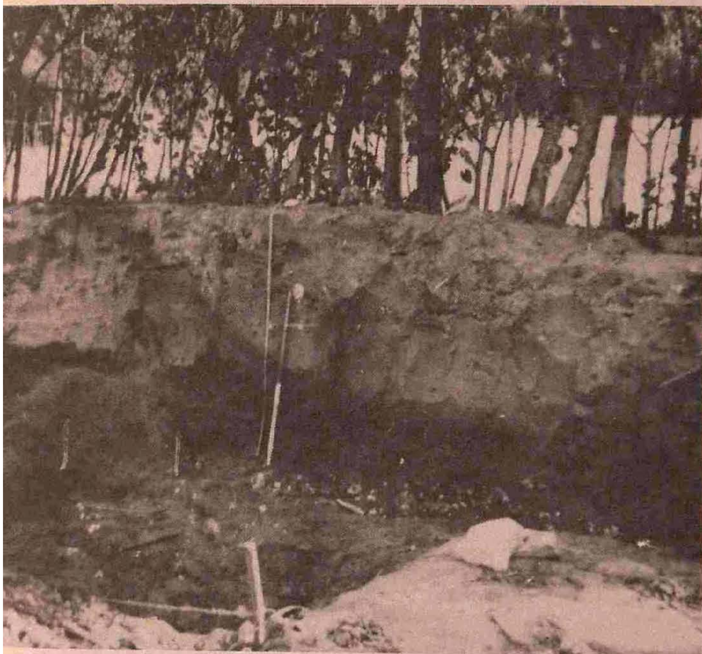


Plate 114 : *Trench A, Kārainagar.*

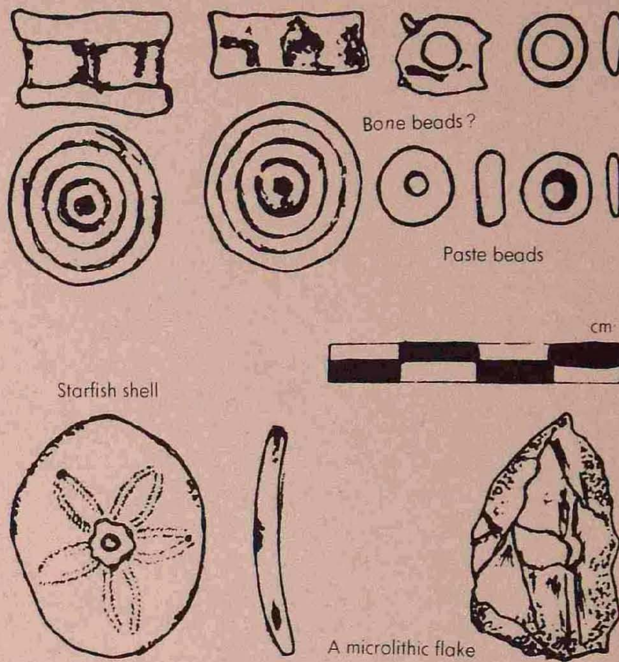


Plate 115 : *Finds from trench A, Kārainagar.*

successful than the previous one as the trench was found heavily disturbed by later 'epidemic burials'. Two layers were found here. The upper layer contained a number of skeletal remains mixed with artifacts and the lower layer, coral stones.

The burials :

The two skeletal remains obtained in the trench A, layer II were extremely decayed so that only their residues could be observed.

One could easily differentiate these skeletons from the 'epidemic skeletons' found in the premises.[73] These epidemic skeletons were in a good preserved condition and were found without association. But the two skeletons of the trench 'A' were found with *in situ* pottery, and with burial offerings.

Both of them were around 5' in height; one was oriented east to west and the other, west to east.

The burial offerings were found to be identical with those found in the Āṉaikkōttai burials,[74] but the Kārainagar offerings were comparatively less in quantity. The burial offerings were found placed around the skeleton in dishes, bowls and pots. The traceable remains of the offerings



***Plate 116** : Pit B was excavated in an already disturbed spot. Note the bund along the fence that marks the original surface.*

were fish vertebrae bones and fragile animal bones. In one instance, these bone remains were found *in situ* in an ECBRW dish. Crab shells, cattle tooth, paste beads, cat fish jaw bones and a microlithic flake of quartz were also obtained along with the offerings.

The burials of the trench B indicated a possible disturbance that took place in the megalithic layer presumably by the late epidemic burials. In the 10' X 10' trench itself we found nearly 8 full skeletons and portions of some more skeletons all haphazardly placed. However Megalithic ECBRW, other early pottery and paste beads were found in the disturbed implementiferous layer of the trench but not *in situ*.

The pottery types :

As a classified list of pottery is given at the end of this report, only certain salient features are discussed here. The pottery types are similar to those usually found in the Megalithic burial sites.

This is one of the five sites of the Jaffna peninsula where the Early Carinated Black and Red Ware was obtained. However, this ware of Kārainagar is comparatively coarser in texture than that of Kantarōṭai or Āṉaikkōṭṭai.

The interesting aspect of the BRW sherds was the graffiti marks. Three sherds were found with the graffiti marks, like the Brahmi 'Ma', twin tridents and a fish symbol within brackets. A thin fine ware, grey on one side and orange on the other was also found among the pottery of one of the burials. We are not sure whether it is an associated ware of Rouletted Ware or any other type earlier than that. In fact, no Rouletted ware sherds were found in the trenches, but they were collected on the surface.

The other finds :

A special finds list is annexed. Hence only certain special points are discussed here.

Iron was not found in the trenches, but iron slags were available on the surface of the site.

The presence of a microlithic flake of quartz as an offering in the Megalithic burial which yielded no iron implements is something significant. Quartz is an alien material to Jaffna.

Excavation remarks :

We determine the culture found in this rescue excavation as Megalithic, based on the criteria mentioned in the Āṉaikkōṭṭai report.[75]

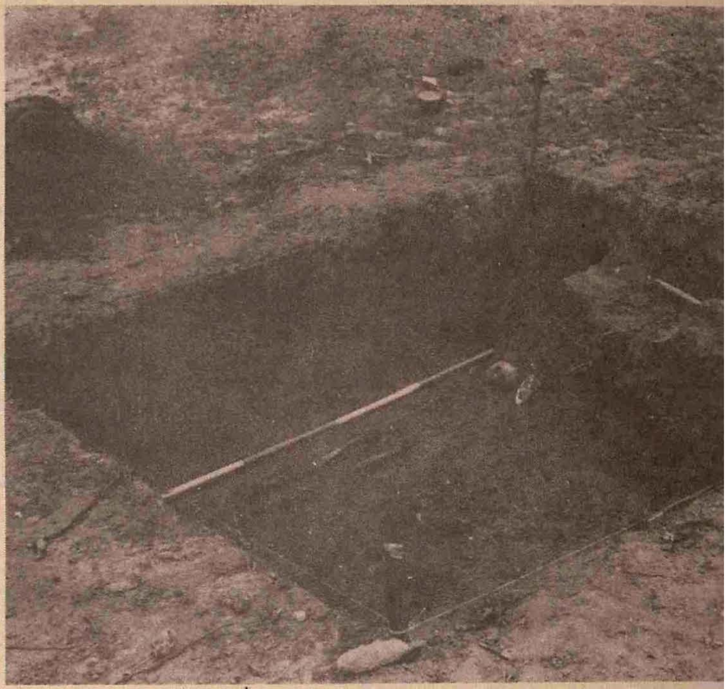


Plate 117 : *Trench B, Cattirantai, Kārainagar.*

The archaeological reconstruction and interpretation of this cultural context follow in the subsequent chapters.[76] Hence this report deals only with the problem of chronology.

It is difficult to arrive at even a tentative date without the help of absolute dating methods. In addition, confusion is caused by the 'epidemic burials'. However on typological grounds and on the strength of the pottery sequence established, it may be possible to arrive at a date not later than the beginnings of the Christian era. The absence of Rouletted Ware and iron implements in the pits, the comparatively coarse texture of the ECBRW pottery and the microlithic flake as a burial offering may even push back the date of the site. As the location is the nearest point to the sub-continent and is situated in the entrance to the Jaffna lagoon, there are possibilities for the first arrivals of the Megalithic folk to select this place to settle. A full-fledged excavation in the undisturbed portion of the mound will certainly reveal valuable information on the early settlers of the Peninsula.

List of pottery types :

1.1/I /C
1.1/II /C
3.3/? /C
3.4/III/M
3.5/III/M

5.2/V /V

A fine thin ware similar to type 4.6 (interior saffron and exterior grey with saffron patches) was obtained in the excavation pits. However, these sherds were comparatively coarse and distinctly differ from the Type 4 wares.

Coarse Black and Red Ware sherds were found in abundance in the excavation pit. As we didn't get any BRW rim sherd other than type 1, we could not determine the existence of type 2. Only by the shape of the body sherds they were assigned to type 2. However, type 2 was found on the surface.

List of other finds from Trench A :

1. Two polished shark vertebrae, probably used as beads.
2. One bone bead.
3. Two paste beads.
4. One starfish shell with a hole in the centre; probably used as a bead.
5. Two pieces of cattle teeth.
6. Fragments of small bones.
7. Cat fish jaw bones.
8. Crab shell fragments.
9. A microlithic flake of quartz.

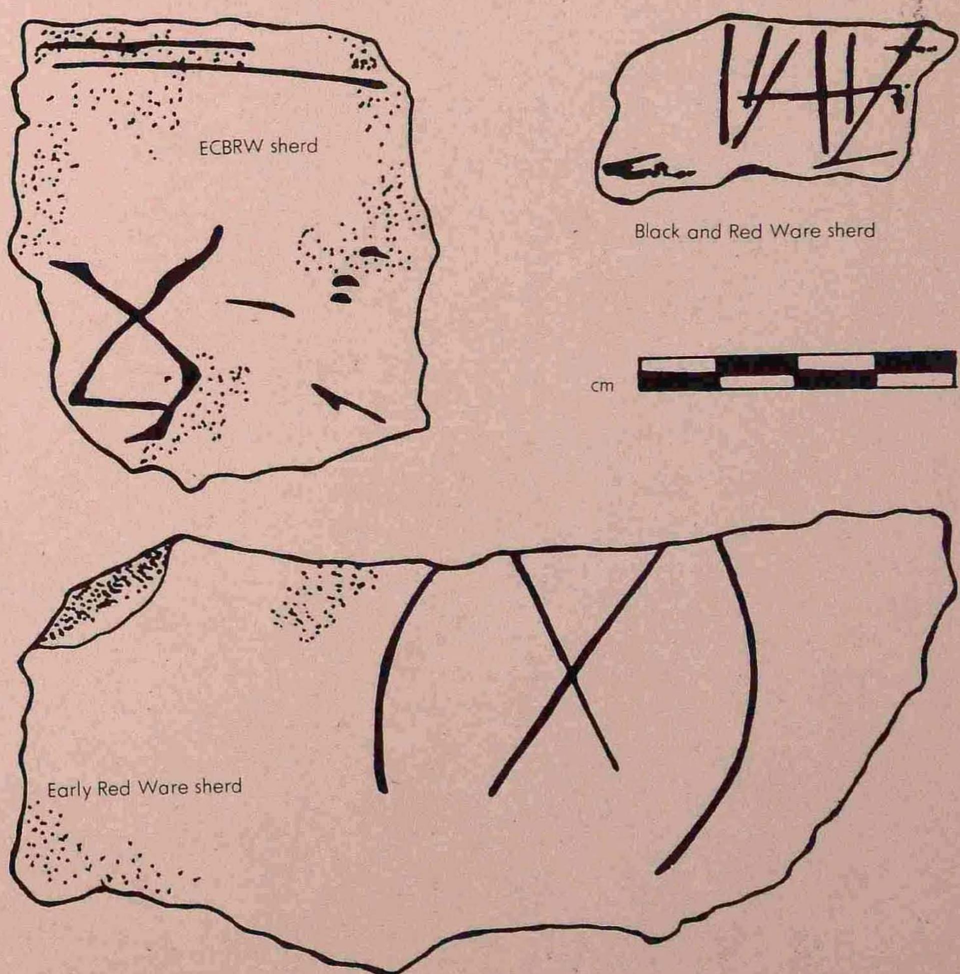


Plate 118 : *Graffiti marks on potsherds — Finds from trench A, Kārainagar.*

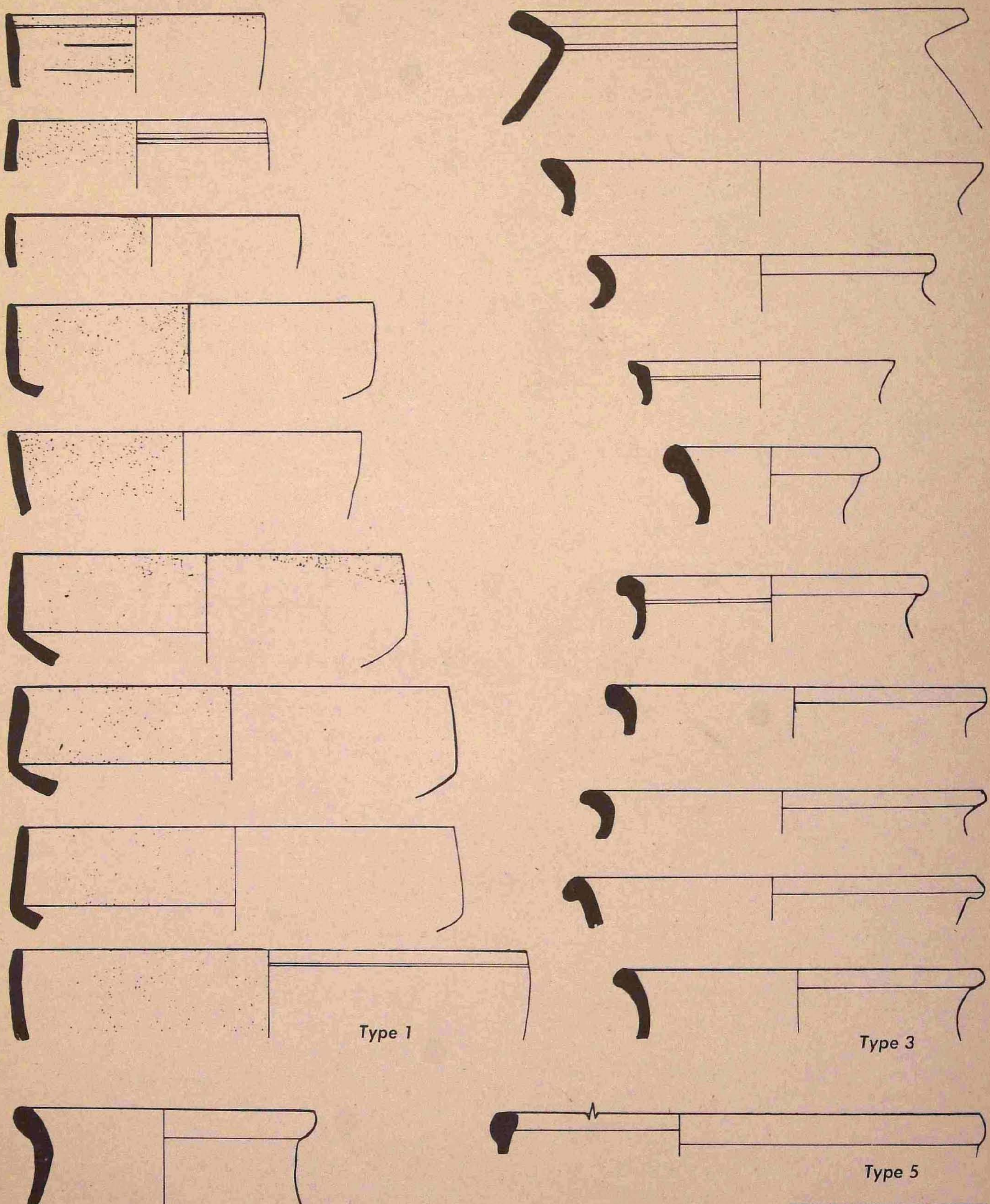


Plate 119 : *Pottery types — Cattirantai, Kārainagar (excavation).*

SETTLEMENT AND SUBSISTENCE PATTERNS

Plate 120 : *'Karappu', a primitive lagoon fishing device, is still surviving in Jaffna. The equipment has an inlet at the bottom and an opening on the top. It is placed in the shallow waters of the lagoon, the inlet facing the current. The trapped fish, crab etc., are picked through the top opening. The specimens, photographed at Kaççāi jetty, are metal replicas of an earlier cane model.*

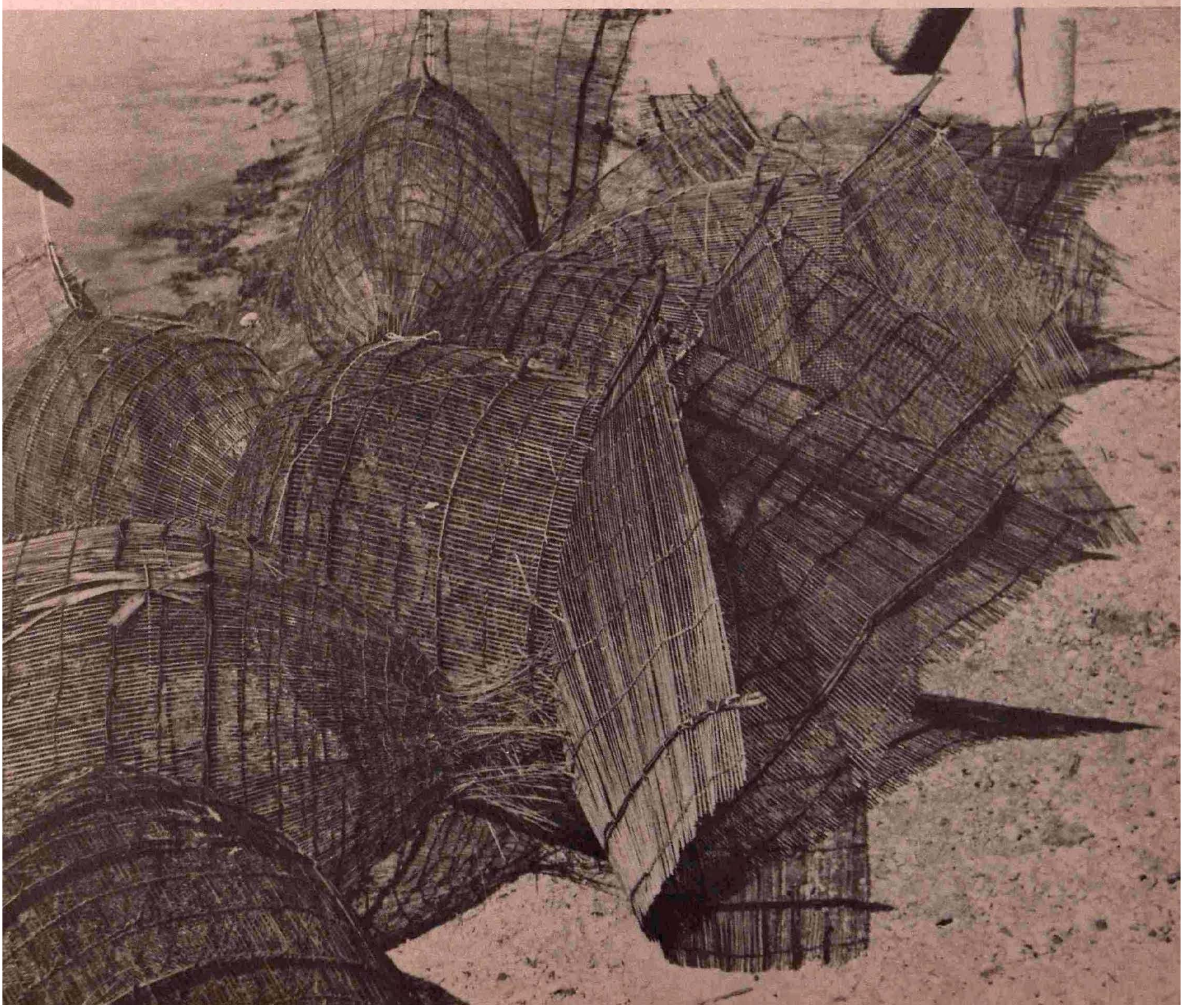


Plate 121 : *In Jaffna, freshwater resources played an important role, determining the location of an early settlement. Easily accessible sources like the dune-sand groundwater and natural sink-holes in the limestone terrain were the ones tapped first by the early inhabitants. Seen in the photograph is a tiny lotus pond near Nākarkōyil, formed naturally by the collapse of the limestone crust.*



Environmental Conditions and Settlements

The reconstruction of the settlement and subsistence patterns of a region is an interdisciplinary task that can be undertaken only after locating a satisfactory number of archaeological sites in a region. Further, to say anything objectively on this topic, excavated evidences must be available at least for a few sites of the region.

In the case of our research, the main effort was to achieve the fundamental objectives; locating the sites, analysing and recording them, establishing the aspects of the culture that prevailed, and fixing the dates.

However, in this chapter, we have made an initial attempt to reconstruct the early settlement and subsistence patterns with the help of the evidences unearthed during our survey. We hope a comprehensive and systematic attempt will follow.

GroundWater

The Jaffna peninsula has no rivers or reservoirs. The climatic conditions of the Peninsula are such that its fresh water availability depends only on the two months' rainfall of the returning monsoon. The annual average rainfall is 50"-52". The minor flood-outlets and the ponds will become dry in summer. Hence, the predominant perennial fresh water source in Jaffna is the ground water.[1]

In our survey, we have observed four types of ground water occurrence in the Peninsula.

Limestone Groundwater

Hereafter this will be mentioned as limestone ground water. This is available throughout Jaffna, but the saline-free, perennial, limestone ground water is mainly found in the red soil area of the Peninsula.[2] One has to penetrate the limestone bed, sometimes up to 30', to reach this source. However, in the limestone terrain there are certain naturally formed sink water holes, tidal wells and springs that may have been used by the early settlers, as some of them are located near the early settlement sites.

Dune-sand Groundwater

This was observed all along the coastal sand-dunes, but significantly in the eastern sandy stretch of the Peninsula (Vaṭamarāṭci, Paccilaippaḷḷi dune-sands). This region, especially Paccilaippaḷḷi, yields large quantities of fresh ground-water from its sand-dunes. At Tāṭṭankōṭu (Paccilaippaḷḷi) we observed a large farm being irrigated by a single *turavu* (well).

In the sand-dunes of the other parts of the Peninsula, the ground water yield is comparatively less. At Eḷuvaitīvu (an island adjoining the Peninsula) during dry months, we noticed that people after burrowing the sand, wait for hours to collect the oozing water. This water will be palm-lifted, filtered through a piece of cloth and collected in a pot.

Coral Layer Groundwater

In this feature, fresh groundwater is found in a coral layer overlaid immediately with ashy silt and then sand. This stratigraphy was observed in the northwestern coast of the Peninsula, in the Islands, and along the Lagoon coasts.

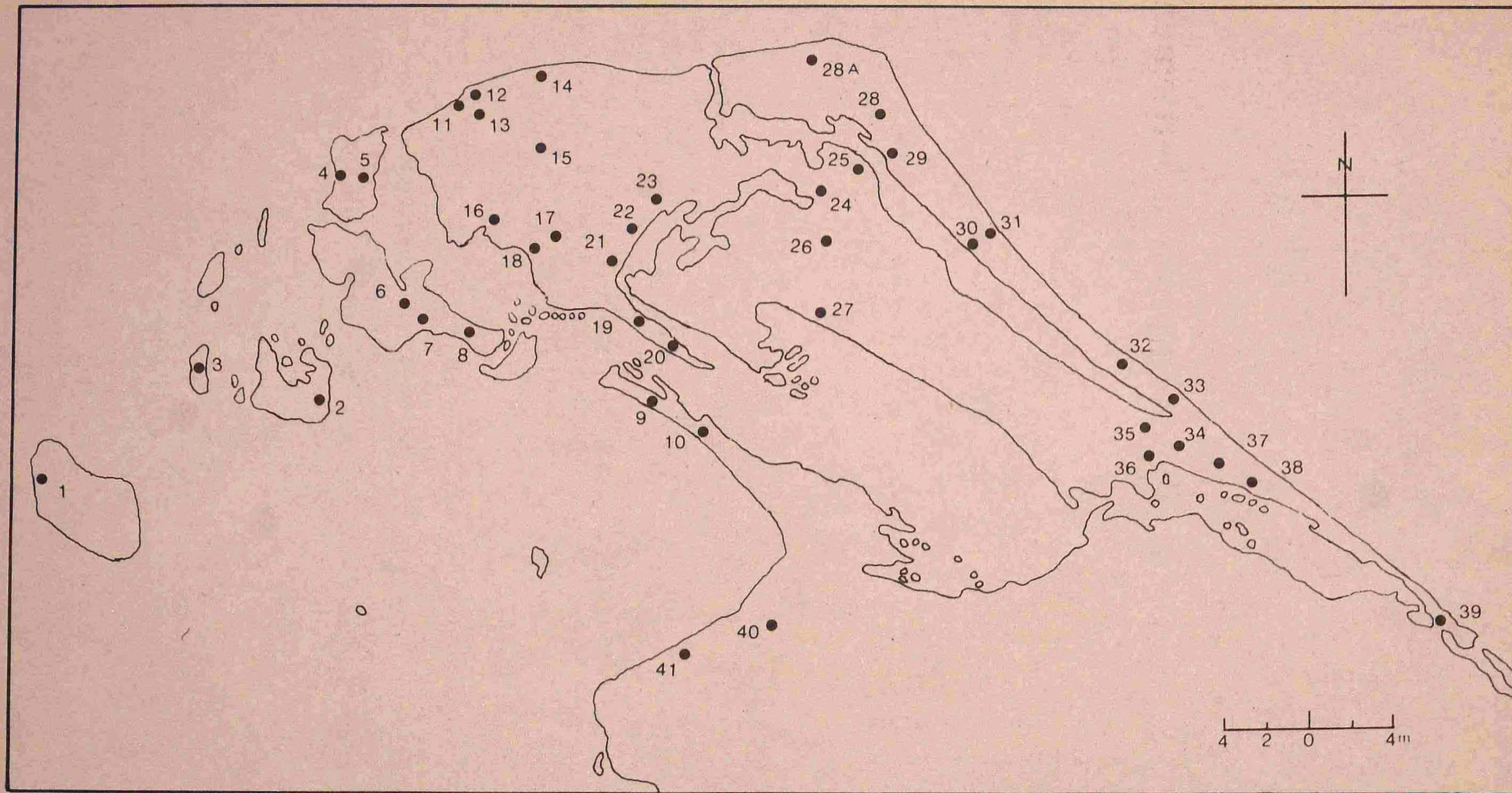


Plate 122 : *Jaffna peninsula — distribution of early settlements.*

Key to the Map : *1. Veṭiyaracaṉkōṭṭai; 2. Tikaḻi; 3. Nayiṉātīvu; 4. Vērappiṭṭi; 5. Cattirantai; 6. Kumpuruppiṭṭi; 7. Cāṭṭi; 8. Allaippiṭṭi; 9. Maṇṇittalai; 10. Kautārimuṉai; 11. Tiruvaṭinilai; 12. Ticaimaḻuvai; 13. Kāṭṭuppulam; 14. Āṉaiviluntāṉ; 15. Kantarōṭai; 16. Kalaiyōṭai; 17. Muḷḷi; 18. Āṉaikkōṭṭai megalithic mound; 19. Ariyālai East; 20. Pūmpukār colony; 21. Nallūr; 22. Irupālai; 23. Kōppāi; 24. Kalvaḷai; 25. Paṅkuṉippiṭṭi; 26. Vērakkāṭu; 27. Kaccāi; 28. Vallipuram; 28 A. Tulukkaṉkōṭṭai; 29. Valikanṭi; 30. Nākarkōyil; 31. Karumaṇalkumpi; 32. Tāḻaiyaṭi — Cempiyaṉpaṟṟu; 33. Vettilaikkēṇi; 34. Taṭṭaṉkōṭu; 35. Maṇṭalāi; 36. Kōyilvayal; 37. Nittiyaveṭṭai; 38. Kuyavaṉpiṭṭi; 39. Papparavappiṭṭi; 40. Maṇṭakkal Āṟu microlithic site; 41. Pālavikkuḷam.*

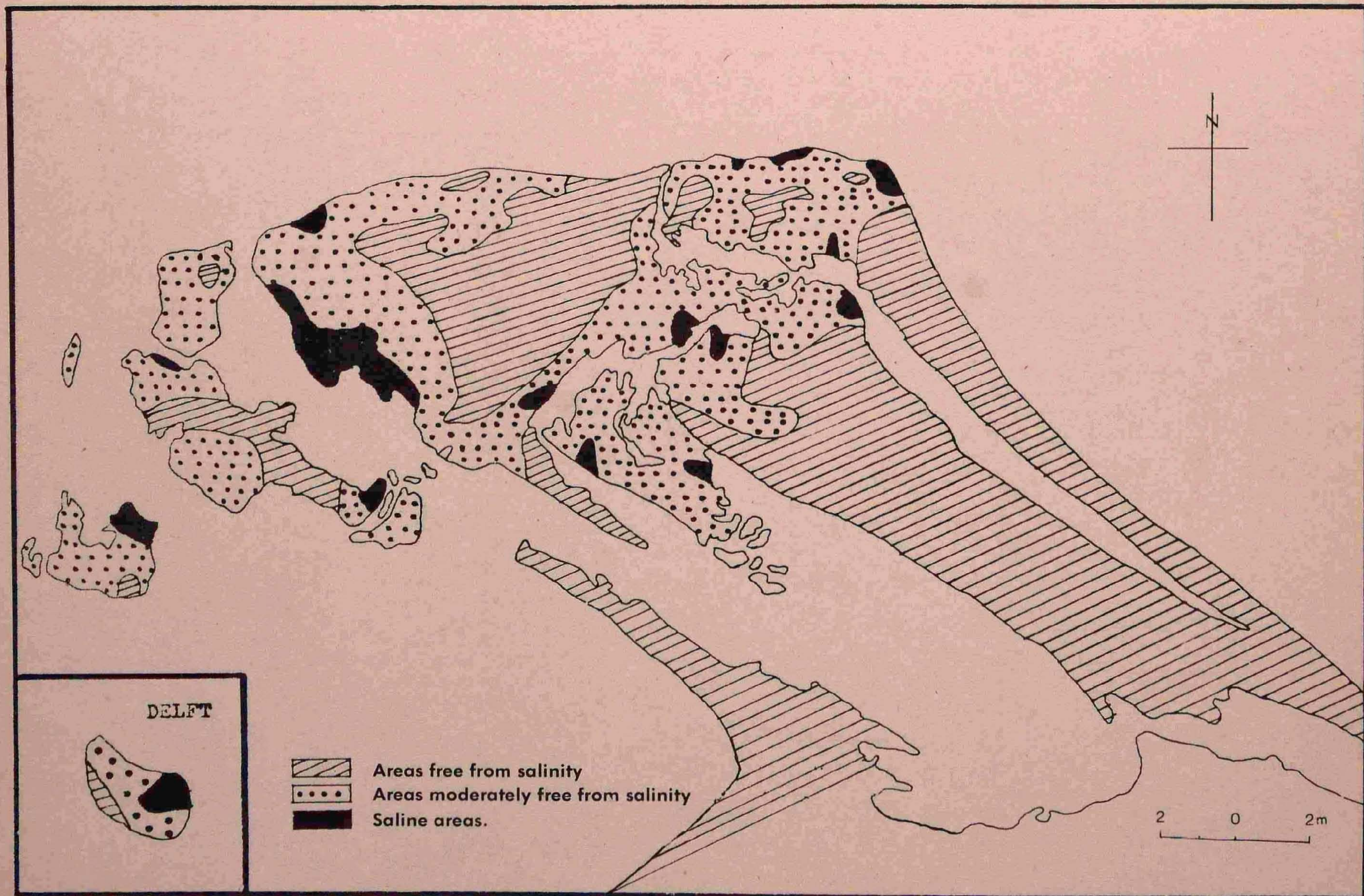


Plate 123 : *Jaffna peninsula — distribution of groundwater salinity.*

Groundwater beneath shale/sedimentary rock layer :

Shale, a kind of sedimentary rock, is a coastal formation. This is a cement-like rock of thin layers, in which shells are embedded. Such rock formations take place even now and can be seen along the deep sea coasts especially in the eastern side of the Peninsula. These slabs of sedimentary rocks are overlaid by sand dunes and they preserve the percolating rain water by sealing them. Fresh water can be obtained in small *turavu* wells around 3'-4' deep, by burrowing sand and opening the sealing sedimentary rock slabs. Such wells can be seen in the vicinity of early settlements along the eastern coast.

At present, the first type is the predominant mode of groundwater occurrence, exploited for domestic as well as for economic purposes. However, the distribution of the early archaeological sites, correlated with the physical map of the Peninsula, clearly reveals that the red soil region of the Peninsula, where the limestone ground-water potential is vast, was not inhabited by the early settlers. These areas seem not to have been occupied until about the times of the kingdom of Jaffna.[4]

One of the possible reasons may be the comparatively inferior iron technology and the tiresome process of penetrating the limestone rocks to reach the freshwater. But in our opinion, we feel that it was the subsistence pattern of the early settlers that prevented them from inhabiting the interiors of the Peninsula — the red soil area. The life of the early settlers was based on a multifaceted system; a combination of subsistence farming, pasturing and aquatic exploitation.[5] The red soil region was not suitable to this pattern of life. It was only at a much later time, when vegetable gardens and commercial crops like tobacco became popular, that the red soil region was fast populated, tapping the limestone groundwater with the help of the developed iron technology.



Plate 124 : *A 'turavu' well in the sandy stretches of Paccilaippaḷḷi. Note the burrowed sand heaped at the edges. This well was seen being used for irrigating the adjoining vegetable gardens.*

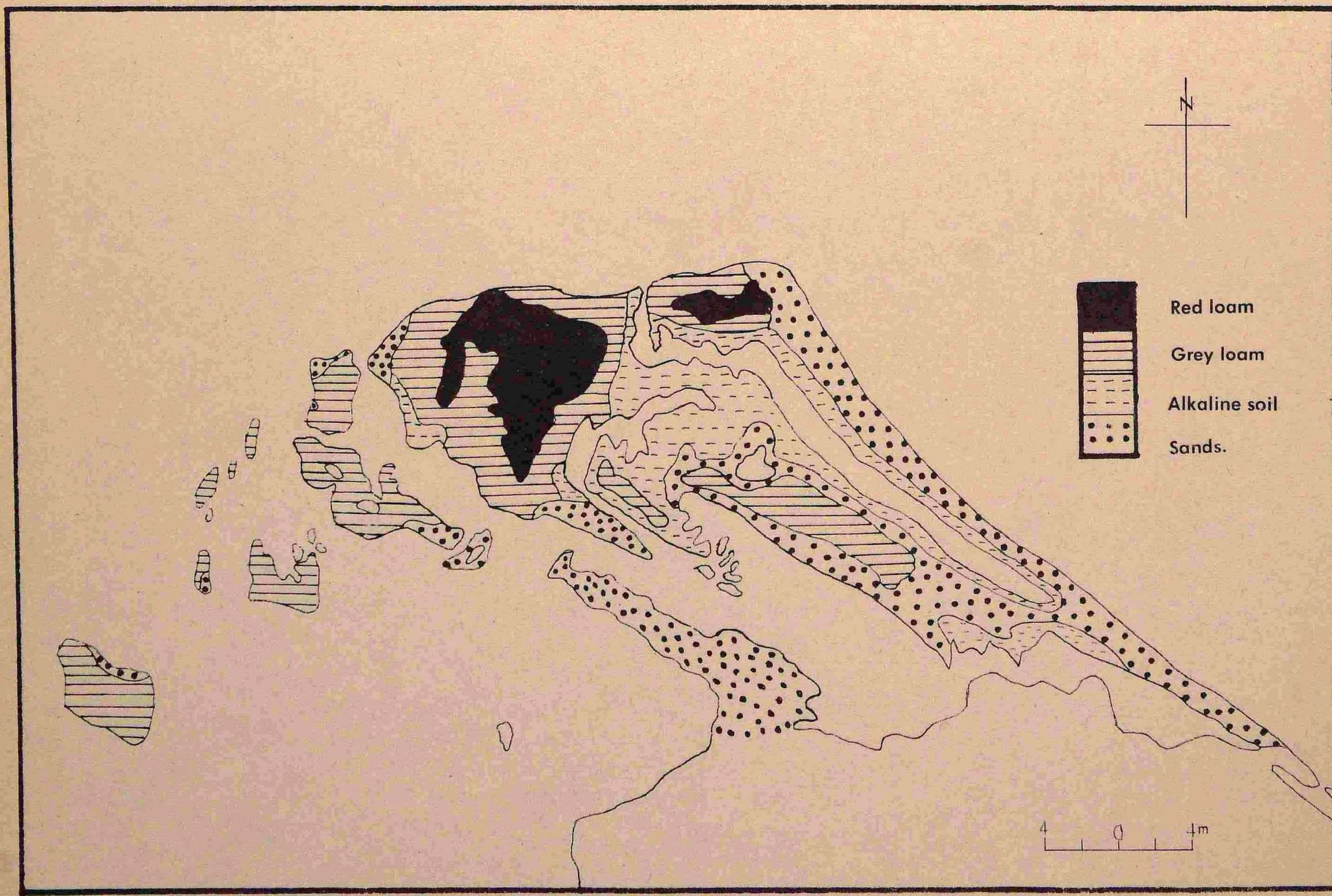


Plate 125 : *Jaffna peninsula — soil map.*

This research has led us to conclude that access to perennial fresh water at shallow depths was the predominant factor determining the location of an early settlement. Thus, the dune-sand groundwater and the coral layer ground water seem to have been the sources tapped first and widely by the early settler.

Unlike the limestone groundwater, this dune-sand groundwater is saline-free, lime-free, and thus tastier. It is easily reached just by burrowing the sand to a depth of two to four feet. This type of well is known as *turavu*,[6] and still widely found in the sandy areas. A popular usage in Tamil to denote the essential items of sustenance — *vīḍu-vācal, tōṭṭam-turavu, māṭu-kaṉṟu* (protected house, garden with *turavu* well and cattle), explains the part played by *turavu* in the life style of the people of Jaffna.

Plate 123, the map prepared by Water Resources Board, points out the salinity of groundwater in the Peninsula. A correlation of this map with the distribution of the early archaeological sites interestingly reveals the role of the coastal saline-free, fresh-water belt in the location of the early settlements.

However the coastal *turavu* fresh-water is a more limited source than the limestone groundwater and cannot be exploited for large scale economic activities except in the Paccilaippaḷḷi area. It can support only a small population and meet its domestic needs.

Probably, the limited availability of fresh groundwater in the sand dunes checked the further growth of settlements in the sandy region of the Peninsula. The conditions that were ideal for the first arrivals, became less conducive for the subsequent generations and they started moving towards the interior of the Peninsula, in the process of modifying or evolving their subsistence activities.

Surface Water

The next important water source is the surface water. The geography of the Peninsula does not possess any significant drainage pattern.[7] But to the early settlers even the minor flood outlets were as significant as the ground water sources. In Jaffna, while a portion of the rain water percolates to the limestone rocks, the



Plate 126 : *Seen in the process of making a 'paṭṭai' — a palmyra leaf bucket used to lift water especially from 'turavu' wells. Photographed at Muḷḷiyāṉ, Paccilaippaḷḷi.*

remaining, as surface run-off, flows towards the lagoon of the Peninsula. As the coast facing the deep sea is higher in elevation than the lagoon coast, surface run-off towards the deep sea is minimal. Most of the major flood outlets flow towards the lagoon. This, in fact, almost submerges the lagoon coast alkaline plains for 2-3 months, and they would have provided ideal paddy fields for the early subsistence farmers.

These conditions were also noticed along the major flood outlet of the Peninsula — the Valukkai Āru — and along the other flood outlets like Cippittarai Vāikāl etc. All the present paddy-field belts of Jaffna are situated in the course of these flood outlets.

Not surprisingly, most of the important early sites and central places of the early settlement pattern are found along these flood outlets.

The major flood outlet, Vaḻukkai Āru[8], originates at Kaṭṭuvaṉ in the central part of the Peninsula and coursing through the villages of Tellippaḻai, Aḷavetti, Kanṭarōtai, Kaṭṭuṭai, and Navāli, flows into the lagoon at Kalluntāi. It has a number of tanks and ponds in its course, and they are concentrated around Kantarōtai. The growth of Kantarōṭai as an early central place in the settlement pattern of the Peninsula should be attributed to this flood outlet called Vaḻukkai Āṟu.

The other flood outlet Cippittarai Vāikāl, originates at Urumpirāi, passes through the villages of Kōnṭāvil, Nantāvil, Kokkuvil and Vaṇṇārpaṇṇai and flows into the lagoon at Āṉaikkōṭṭai, exactly where the Megalithic site is located. Even this flood outlet, in turn has ponds in its course. Though our survey failed to find archaeological sites along these ponds, we still have a hope to find at least one adjoining the Nantāvil tank for we already have information on archaeological finds. The Poṉṉālai-Paṟālāi-Panṭatarippu paddy-field belt is another flood outlet where again important early sites are located.[10]

Even in the islands, at Vēlaṇai and at Kārainagar, the phenomenon discussed could be noticed.

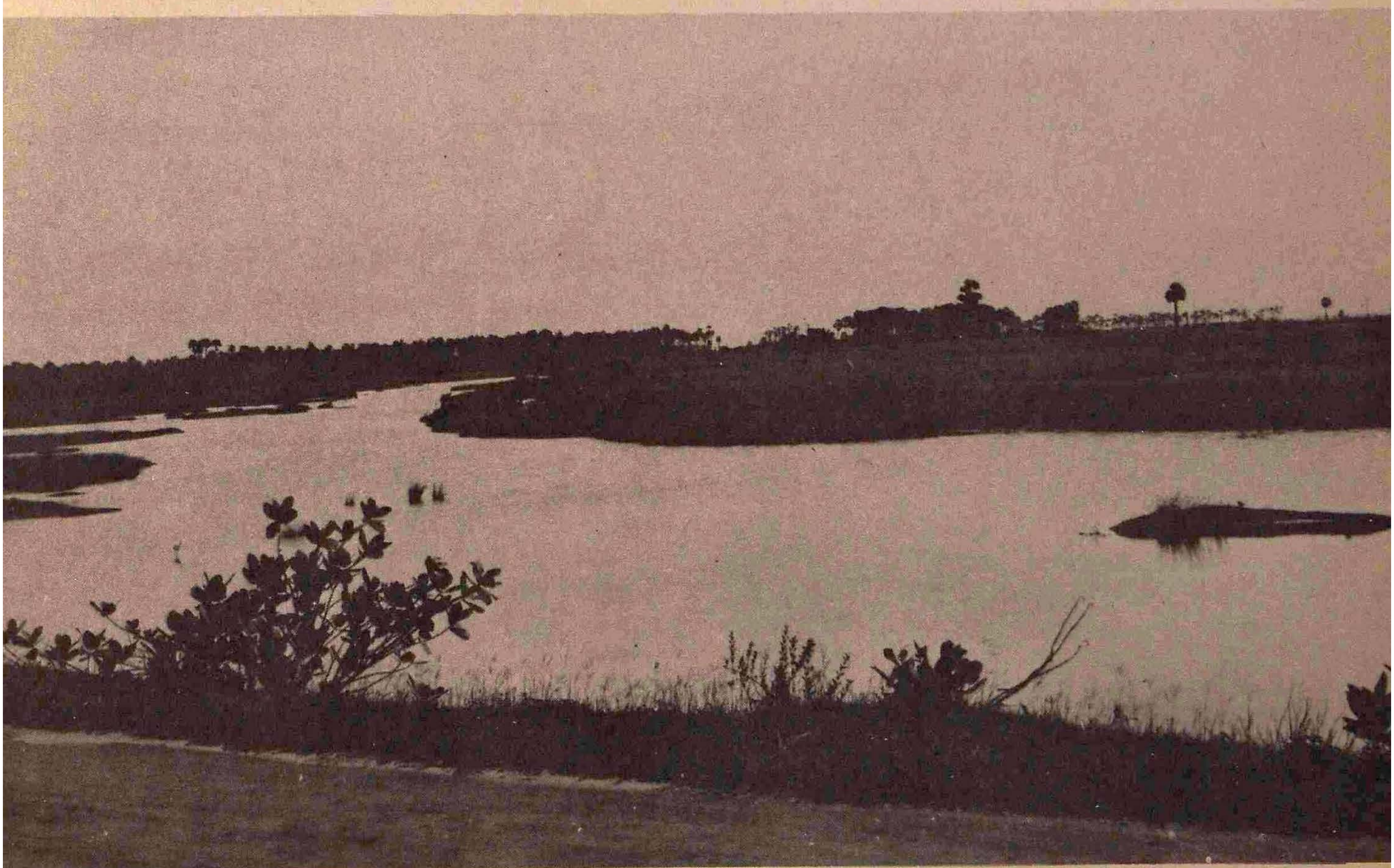


Plate 127 : *Valukkaiyāṟu coursing through Navāli, seen in the month of November.*



Plate 128 : *An example of 'vil' pond — Paṇṭārakkuḷam (king's pond) at Nallūr. Note the dissolved limestone terrain in the foreground.*

'Vil' type ponds

Another feature of the surface water of the Peninsula is the *'vil'* type of ponds. Some of these ponds are formed naturally in the limestone bed where in some spots the weak layer of limestone dissolves in the rain water and collapses.[11] Such shallow, water-stagnant areas, in the drought-menaced Peninsula, could be ideal for storing water if a small bund could be raised. The ancients had a system of raising a semi-circle bow-like bund (that rendered the term *vil* for the ponds). During drought times, at least muddy water could be preserved along the semi-circle bund. This could be observed in south India and in Sri Lanka, especially in the arid plains.[12]

In the Peninsula, these innumerable *'vil'* ponds later became nuclei for the settlements. The names of the *'vils'*, derived from the associated flora & fauna or its characteristics, became the name of the village, [eg. Kokkuvil (crane-tank), Manduvil (frog-tank), Nantāvil (perennial tank), Utuvil (acacia tank)].

Sink Holes and Kēṇis :

Another kind of ponds are natural sink holes found in the limestone terrain. In some places these sink holes known as *Kuntu* are nuclei for large ponds. Many of the natural sink holes were converted into *kēṇis*, by constructing their sides with chiselled coral or limestone and bearing the original limestone section to be visible at the bottom. Excavated ponds are also a common phenomenon in Jaffna. They were dug into the limestone bed and were constructed similar to that of a *kēni*. Most of the *kēṇis* are in the shape of a *turavu* with a sloping entrance.

There are innumerable *kēnis* throughout Jaffna peninsula. They were the centre of village life until recently and even today are so in many pockets. They served the people to take bath; wash clothes and provided drinking water for the cattle. *Kēni Āvurancikkal* (cattle rubbing stone in the shape of a *Sivalingam*), shady grove and a folk or brahmanic temple adjoining it are a common village scene. Traditionally the *kēnis*



were removed of silt by annual voluntary service. Thus, they were kept clean and the rain water easily percolated through them to feed the groundwater table, which rendered the neighbouring wells perennial. In the course of time, in the Peninsula, such practices have come to be neglected and many village *kēṇis* get silted up and are abandoned. This will pose a problem in future to the groundwater table as the water exploitation is increasing and the percolation is reduced by neglecting these traditional devices.

Surface water at Paccilaippaḷḷi :

A special feature of surface water at Paccilaippaḷḷi is the stagnation of rain-water. Many stretches of Paccilaippaḷḷi are rain-flooded and look like a large reservoir during the months of the returning monsoon. Part of this water flows into the Cuṇṭikkuḷam lagoon while the remaining is stagnant in the shallow areas for a few months and in some spots, throughout the year. Certain areas in Paccilaippaḷḷi are accessible only during summer. This surface water phenomenon is the reason for the innumerable *kuḷams* (ponds) in Paccilaippaḷḷi (see Paccilaippaḷḷi site map) and for the availablity of a large quantity of fresh-water in the dune-sand *turavu* wells.

Fresh-water is something precious in the culture that evolved in the Peninsula. A perennial fresh-water yielding source like Kīrimalai is much revered right from the old times, and glorified by legends.[13] In spite of water supply schemes and mechanised water lifting methods, availability of fresh-water is still a predominant factor determining the land prices in the Peninsula.



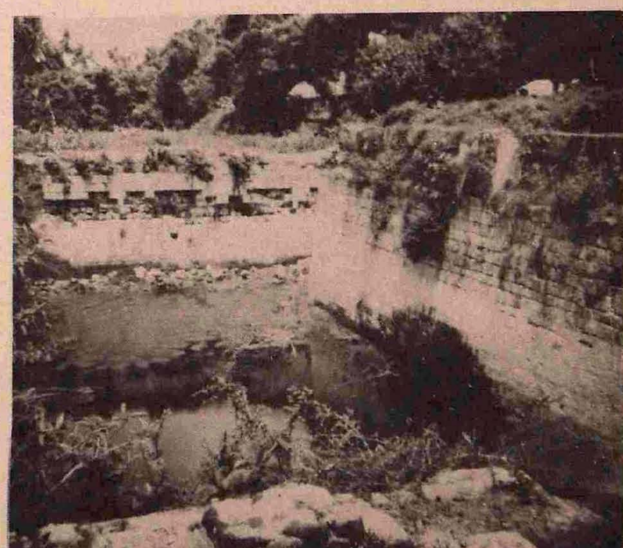


***Plate 129** : A naturally formed sink-hole known as 'Iṭi-kuṇṭu' at Navāli, irrigates the neighbouring paddy-fields.*

***Plate 130** : Rain-floods feed the watertable in the sandy stretches of Paccilaippaḷḷi. Photographed near Kōyilvayal in the month of November.*

***Plate 131** : 'Yamunā ēri' — a constructed 'turavu-kēṇi' at the archaeological site at Nallūr.*

Paddy-Fields and Pasturing Lands

As described above, land suitable for paddy cultivation is in the alkaline stretch along the lagoon coast, along the flood outlets and around the *'vil'* ponds. Almost all the early sites located in the Peninsula have at least a small patch of paddy-field hinterland.

These paddy fields can be cultivated only once a year, during the returning monsoon rains. After the harvest in January, leguminous plants (mainly *payaru*), sesame, ragi, melons and vegetables are cultivated. They will be ready for harvest before the Tamil New Year day in April. This is the traditional pattern of cultivation still found in the Peninsula.

These lands when left fallow during the peak of summer are suitable for cattle grazing. The other important grazing-lands are the *taravai* grasslands. *Taravai* is a Jaffna Tamil word denoting the marsh-land plains. They are mainly found along the lagoon coast, submerged by stagnant brakish water during the rainy season. In summer they become extensive grasslands, with a hardened alkaline terrain.

This and the scrub forest of the Peninsula are ideal for pasturing, especially for goats and sheep. Almost all the sites of the Peninsula have this pasturing hinterland.

The beginnings of cattle-keeping could be definitely dated to the times of the early settlers as cattle bones and teeth remnants were found in the stratified layers along with the Megalithic pottery.[14] Primitive type of goat and sheep breeding could be still noticed at Parutitīvu, a tiny island between the Aṉailaitīvu and Eḷuvaitīvu islands, inhabited by less than 10 families. Goats and sheep breed here in the scrub forest like wild animals.

Plate 132



Plate 133



Plate 132 : A view of the paddy-fields in the Vaḻukkaiyāṟu belt at Navāli. **Plate 133** *: Paddy-fields after harvest serve for grazing. Kaḷaiyōṭai, Navāli.* **Plate 134** *: Natural vegetation of the paddy field mounds, Paṟālāi. Fairly big trees and thorny bushes are found here.* **Plate 135** *: Limestone terrain natural vegetation, Āṉaiviḷuntāṉ. 'Āvaracu', 'cāya' root and other bushes are the common types found here.* **Plate 136** *: Natural vegetation in the islands of Jaffna. Āvaracu and saline soil plants at Paruttitīvu.* **Plate 137** *: Sand-dune natural vegetation, Taṭṭāṉkōḍu, Paccilaippaḷḷi. Fairly big trees are found here. 'Navāl' is the popular variety.* **Plate 138** *: Lagoon coast natural vegetation at Kuyavanpiṭṭi, near Cuṇṭikkuḷam sanctuary. Seen in the photograph is acacia, locally known as 'uḍai' or 'karuvēlamuḷḷu'. A nearby port along the coast of the Bay of Bengal is known as Udutturai (uḍai tuṟai; tuṟai = port).* **Plate 139** *: Goats breed in the scrub forest at Paruttittivu off Jaffna.*



Plate 134

Plate 135



Plate 136



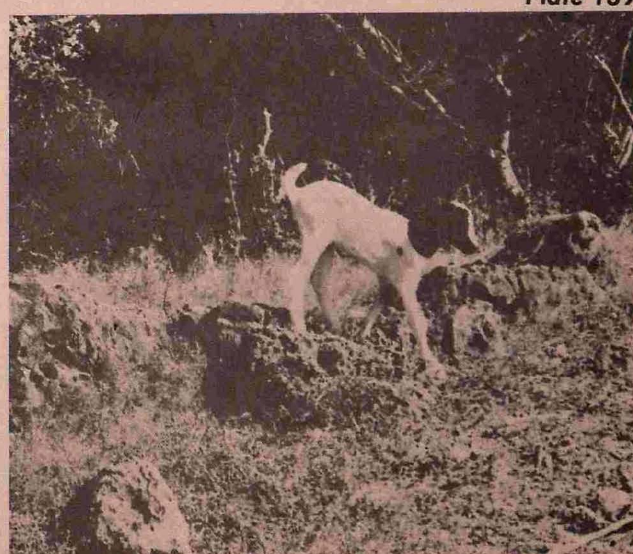


Plate 137



Plate 138

Plate 139



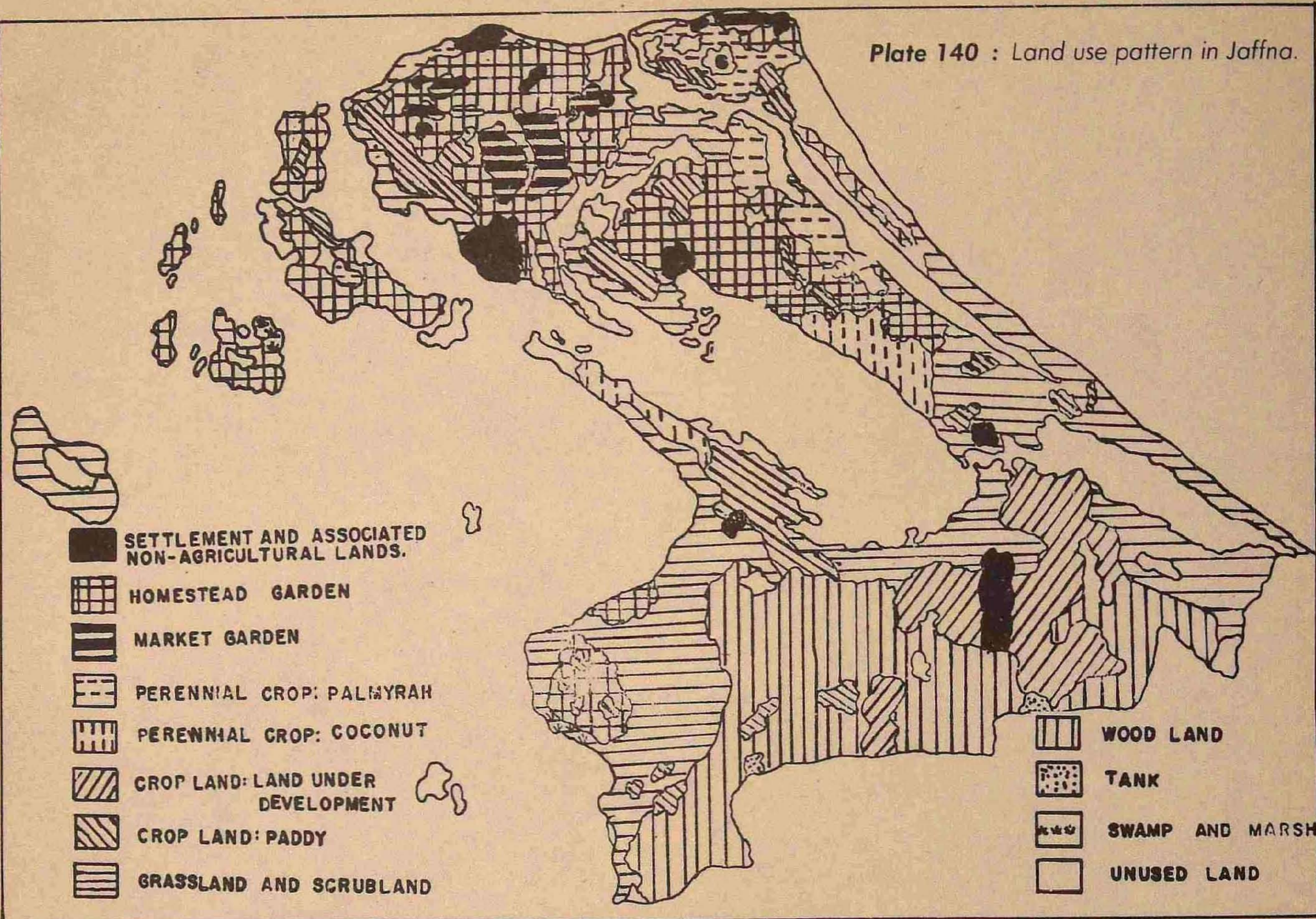


Plate 140 : *Land use pattern in Jaffna.*

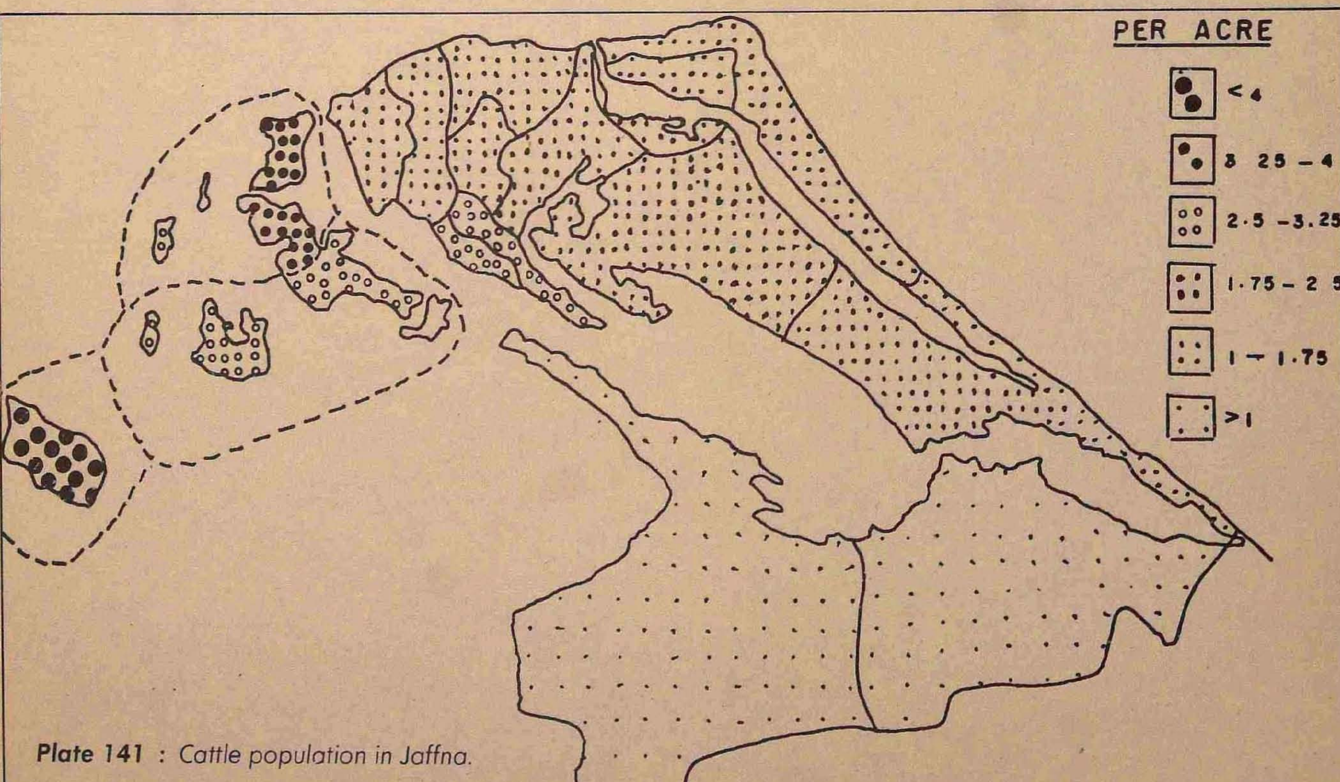


Plate 141 : *Cattle population in Jaffna.*

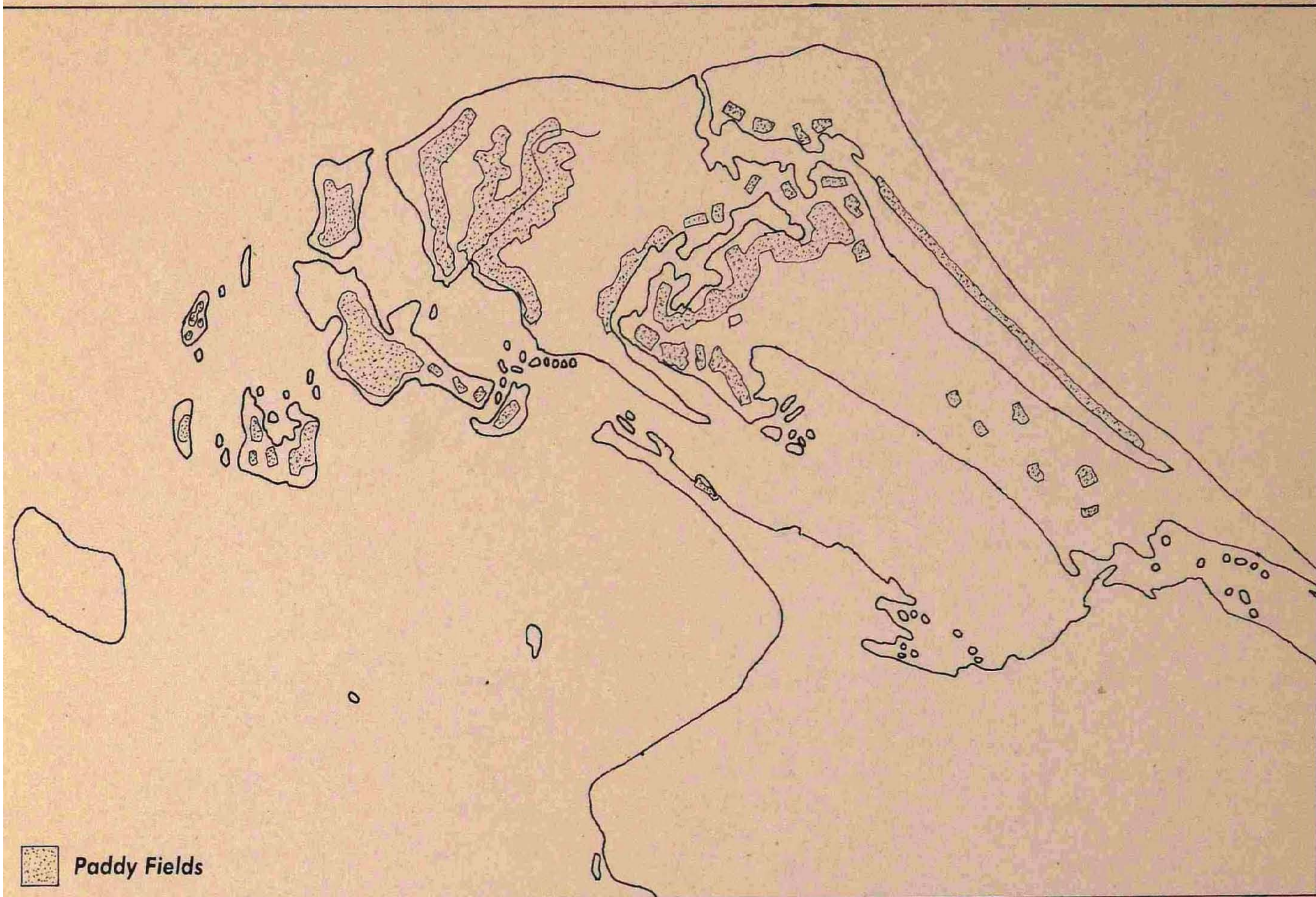




Plate 142 : *Lands under paddy cultivation in Jaffna.*

Plate 143 : *The coastal marshes of Jaffna, known as 'taravai', become grazing-land and provide cart tracks during summer. This 'taravai' stretch, photographed at Poṉṉālai, is the venue for an annual bullock-cart race.*

Proximity to the Lagoon/Sea Coast

Except a few, all the archaeological sites in Jaffna are located either along the lagoon coast or along the sea coast. This explains the importance of the lagoon or the sea coast in the early settlement pattern.

As said earlier, this was primarily because of the multifaceted subsistence pattern in which aquatic exploitation was a major subsistence activity which was testified to by the abundant sea food remains found in the Megalithic burials.[15] The other reason for selecting the coast was communication and trade which are discussed later under the sub-heading 'subsistence patterns'.

Classification of the settlements

Port Settlements/Entrepots

Periyaturai
Cātti — Allaippitti
Vērappiṭṭi
Camputturai
Vallipuram
Nākarkōyil
Vettilaikkēṇi
Cālai
Maṇṇittalai

These are the major deep-sea coast settlements identified in our survey. They can be grouped into four categories.

I. *Entrance Ports or the Ports Guarding the Lagoon Entrances :*

Camputturai and Vērappiṭṭi come under this group. The strategic importance of these ports in the context of access to the Jaffna lagoon is discussed in the concerned exploration reports of those sites.[16] We feel that both Camputturai and Vērappiṭṭi were chronologically either parallel or overlapping sites located at the entrances of the Jaffna lagoon.

Camputturai could have been abandoned after the formation of the Casurina Beach sand bar, stretching from Kārainagar, as it blocked the lagoon entrance on which Camputturai is located. Evidence suggest that this could have happened between 6th and 9th century A.D. This also coincides with the fall of Kantarōṭai.

The port of Vērappiṭṭi which was on the other entrance of the Jaffna lagoon, later shifted to Kayts. This shift might have taken place in around 10th, 11th century A.D., when Nallūr was emerging as the capital of Jaffna. The location of Kayts is more suitable than Vērappiṭṭi to protect Nallūr.

Periyaturai of Neṭuntīvu also can be classified under this group as it was another guarding port for the islands and was touched first by the vessels coming towards Jaffna from the Ramanātapuram coast of Tamil Nadu.[17]

II. *Off-Shore Trade Entrepots of the Jaffna Lagoon :*

Cāṭṭi, Allaippiṭṭi and Maṇṇittalai sites belong to this category. The significance of the geographical alignment of these sites and the similarity of their chronological sequence are mentioned in the concerned reports.[18]

III. *Vaṭamarāṭci, Paccilaippaḷḷi Sand-Bar Ports :*

The settlements, Vallipuram, Nākarkōyil, Tāḻaiyaṭi, Vettilaikkēṇi and Cālai come under this group. These were deep-sea ports facing the Bay of Bengal. At the same time they linked the sand-dune trade route between the Peninsula and the mainland. They also had the advantage of the closest proximity by sea from the Coromandel coast of Tamil Nadu.

Religious Centres

Periyaturai
Tikaḷi
Kumpuruppiṭṭi
Vērappiṭṭi
Camputturai
Āṉaiviḻuntāṉ
Kantarōṭai
Vallipuram
Nākarkōyil

The above sites are identified as religious centres, besides their other functions, on the strength of the structural remains found there and by the prevailing legends.

Lagoon Settlements

Āṉaikkōṭṭai
Ariyālai
Kaccāi

Trade Route Settlements

Except for a few, almost all the sites can be included here as they connect either the sea routes or the land routes. This is discussed in a following sub-chapter.

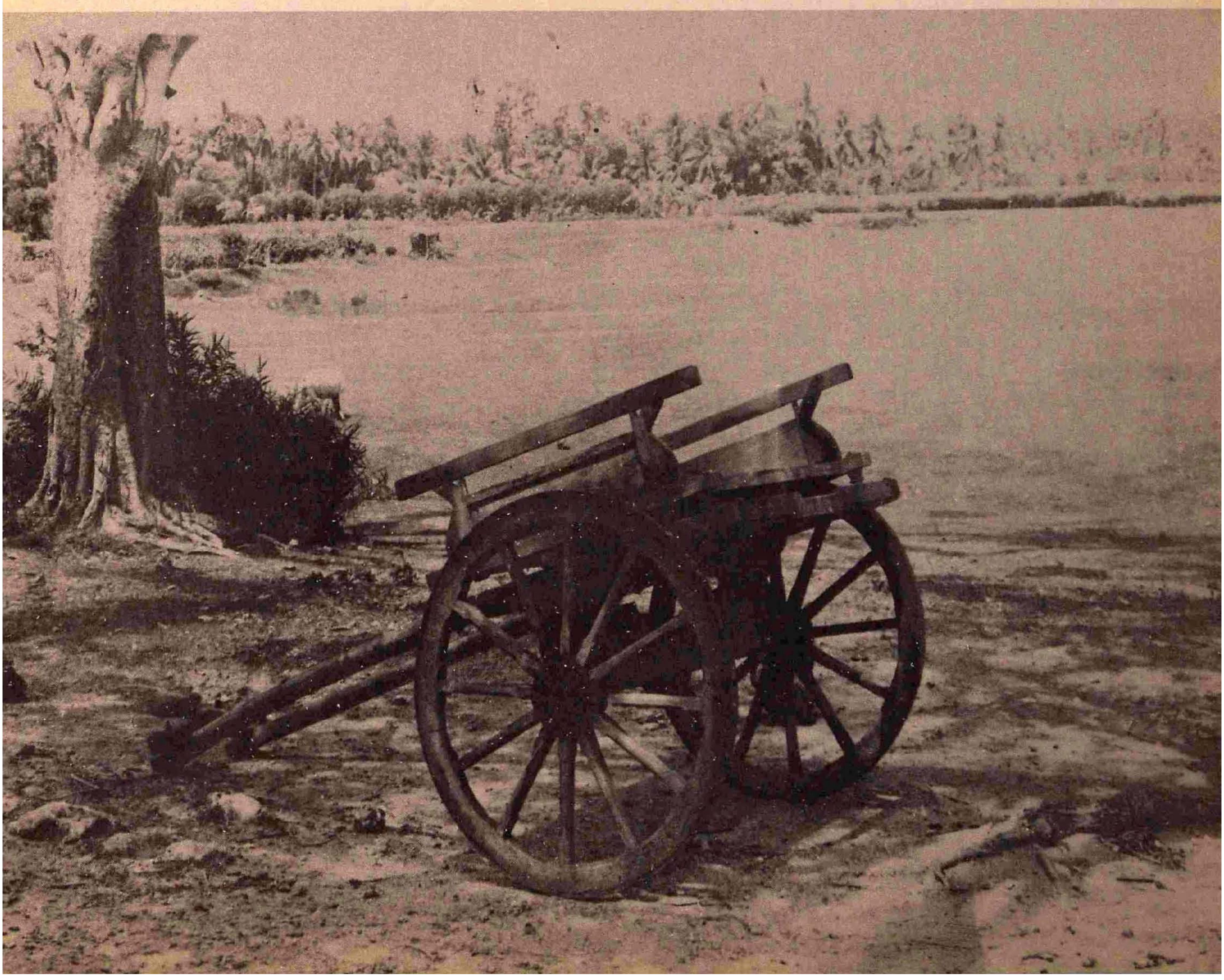
Agricultural Settlements

Tikaḷi
Vēlaṇai Sites
Kaḷapūmi
Camputturai Sites
Kantarōṭai
Navāli
Āṉaikkōṭṭai
Uppāṟu Sites

These sites are classified as agricultural settlements only on the basis of their location in the traditional paddy-fields of Jaffna.

Reconstruction of the Early Communication Pattern

Plate 144 : *'Oṟṟaittirukkal vaṇṭil', bullock-cart drawn by a single bull. A remniscence of the ancient mode of communication, photographed at Kantarōṭai.*



Trans-Oceanic Trade Routes

With the discovery of the navigational potentialities of the monsoon, trans-oceanic trade incorporating the South Asian region, emerged at least in the dawn of the Christian era, if not earlier. The Roman trade, particularly with South India and Sri Lanka, involving the Caṅkam Tamils and the Sātavāhanās, flourished in the first few centuries of the Christian era. There are definite evidences of direct Roman contact upto the Coromandel coast of South India. From the Coromandel coast towards Southeast Asia, trade was a monopoly of South Indians and there onwards carried out by the Chinese. The strategic location of Jaffna in this network was a significant factor to its emergence as a city state or a principality in the early times.

These trade routes were mostly coastal passages and Jaffna had a role to play as the small ancient vessels, coming from the Arabian sea towards the Bay of Bengal, went through the Gulf of Maṉṉār and the Palk Strait. Jaffna lay on the route. This is the reason why one find a number of ancient sites with Roman artifacts on the coastal stretches of the Gulf of Maṉṉār and the Palk strait, both in Sri Lanka and Tamil Nadu. To cite some of them : Kaṛpiṭṭi peninsula, Māntai and Jaffna on the Sri Lankan side; Koṛkai, Aḷakaṉkuḷam, Toṇṭi, Pukār and Arikkamēdu on the Tamil Nadu side. The Adams Bridge reef (*Rāmar Aṇai* or *Tīṭai*) which separates the Gulf of Maṉṉār from the Palk strait, was crossed by the ancient vessels either at Māntai (Maṉṉār, Sri Lanka) or at Pāmpaṉ (near Ramēs'varam). The recent discovery of Roman artifacts and a brick fort at Aḷakaṉkuḷam near Ramēs'varam, excavated by Dr. R. Nagaswamy, point to the use of the Pāmpaṉ channel in parallel to the one at Māntai, to cross the Reef.

The Roman trade later gave way to the Arab-Chinese trade, shared by the Pallavas, Chōlas, Pāṇdyas and Sinhalese. The importance of the Gulf of Maṉṉār-Palk strait passage persisted in this period though entrepots changed, depending on the central places and the hinterland that were to be served. In the subsequent centuries, the coasts of this passage both in Sri Lanka and Tamil Nadu, became the arena for the first Muslim settlements and European forts, testifying the importance and continuity of this route. The location of *Ceṭṭinādu*, homeland of the *Ceṭṭimār* community (traditional sea traders) near the Pāmpaṉ channel is another reminiscent of the trans-oceanic trade that went through this passage.

It was only with the advent of steamers, this strategic passage was abandoned as the big vessels could not able to traverse the shallow waters and the Reef. As a result, the ships started going around Sri Lanka and the importance of Colombo as a major harbour of the region ever increased while the Palk strait ports declined. Inevitably, the socio-political developments in Jaffna were linked with the fortunes of this passage.

Ptolemy's Map of Sri Lanka : 140 A.D.

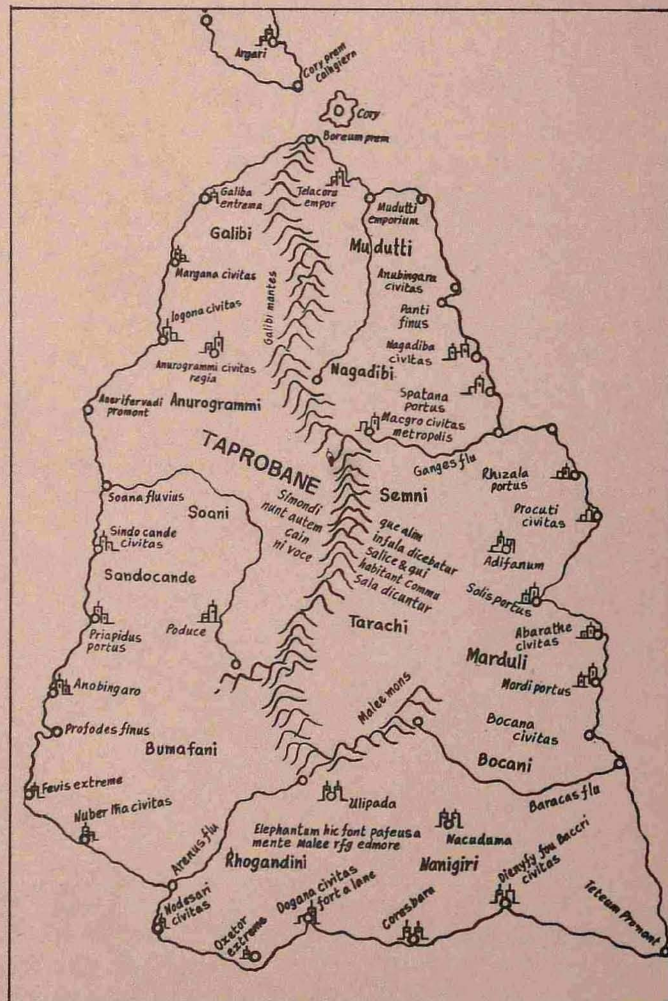


Plate 145 : Ptolemy's map of Taprobane (Sri Lanka), 140 A.D. Note the placenames Nagadibi (Jaffna) Mudutti emporium (Mantai), Spatana portus (Pattinam) and the metropolis at Nagadibi. Also note the channels for navigation adjoining Mudutti (Mantai).

Plate 146 : Wind directions and their local names.

Palk Strait Routes

The Jaffna Peninsula is one of the two nearest points of Sri Lanka from which to cross the Palk Strait and go to the subcontinent. The other region in Sri Lanka with this geographical advantage is Māṉṉar, where the ancient entrepot Māntai flourished.[19]

Quite naturally, it could be speculated that the early sea routes linked the entrepots of the Peninsula with south India, especially with those of the Coromandel coast of Tamil Nadu. The Tañcāvūr and Ramanātapuram Districts, particularly the Point Calimere region of the Coromandel coast, deserve special mention in this respect. Point Calimere is the nearest point, barely around 22-24 miles from many points of the Jaffna Peninsula.

Until British times, official sea trade flourished between the ports of south India and Jaffna peninsula. Sea trade with south India was a prestigious and traditional economic activity in Jaffna, and was abruptly illegalised after independence. The resulting Colombo-centric trade activities led to the decay of the once flourishing entrepots of Jaffna. However, these traditional sea trade routes still survive in Jaffna branded as smugglers' routes,[20] now being used by the militants.

The ethno-archaeological observations on the activities of the traditional sea traders (now smugglers) of Jaffna, reveal interesting clues regarding the early coastal settlements in Jaffna and their contacts across the Palk strait.

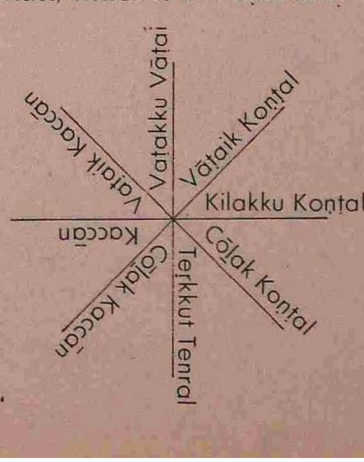
The sea-farers change their port of origin and the port of destination according to the changes in the wind system. For instance, the sea-farers of the northern Jaffna go to Vētaraṇiyam during southwest monsoon and shift the port of destination to Kōṭikkarai (Point Calimere) during northeast monsoon. Vētaraṇiyam and Kōṭikkarai are barely 10 km apart. Still their angles from the northern ports of Jaffna are such that the routes are affected by the changes in the wind system. Similarly the boatmen from the Tamil Nadu coast will change their destination in Jaffna according to the winds. As these practices survive even in this era of mechanised boats, one could imagine the predominant role of the winds to the sailing of ancient vessels. Such practices, well explain why we find a number of early port settlements at a few km intervals in particular coastal stretches of Jaffna. They could be seasonal entrepots. One could also notice that the ports of Jaffna are located in different directions. Māthakal, Kāṅkēcaṉturai, Mayiliṭṭi, Valveṭṭiturai and Paruttituṟai in the north; Urkāvatturai, Periyaturai, Cāṭṭi, Paṇṇai, Kolumputtuṟai, Kaccāi and Maṉṉittalai in the west and south; Nākarkōyil, Tāḻaiyaṭi and Vettilaikkēṇi in the east. They served in different seasons for travel in different directions.

Travelling in small boats from the Palk strait ports of Jaffna to Tuticorin in the Gulf of Maṉṉār, without passing through Pāmpaṉ or Maṉṉār is also found among the smugglers. They cross the Adams Bridge reef, which is locally called *Tiṭai,* at certain mid points that are known only to experienced sailors.

Four wind systems, *Cōḻakam, Vāṭai, Kaccāṉ* and *Koṇṭal,* prevail over Jaffna, annually. *Cōḻakam* and *Vāṭai* are synonyms for the southwest and the returning northeast monsoons respectively. *Kaccāṉ* and *Koṇṭal* are inter-monsoon winds.

The wind *Cōḻakam* gained its name in Jaffna because of its travel prospects with the Cōḻa country (*Cōḻamantala karai* or Coromandel coast). Places like Vētaraṇiyam, Nākappaṭṭiṉam, Arikamēṭu, Pukār, Kalingam, Tāmralipti and even Southeast Asia can be reached with the help of this wind. Likewise *Vāṭai* was conducive to travel to the Pāṇṭiyan country and the south. The *Kaccāṉ* wind was advantageous for travel from Rāmēs'varam, towards the island of Neṭuntīvu. The tiny island Kaccatīvu got its name because of its location in the *Kaccāṉ* wind direction from Rāmēs'-varam. As an easterly wind, *Koṇṭal* helped to travel towards west from Jaffna.

Among the wind systems Cōḻakam was predominantly beneficial, hence there were more contacts with the Coromandel coast from the northern ports of Jaffna. The temple at Vētaraṇiyam in the Coromandel coast is still a property of the people of Jaffna. It belongs to the Varaṇi Mutt, which is in Vaṭamarāṭci, Jaffna.



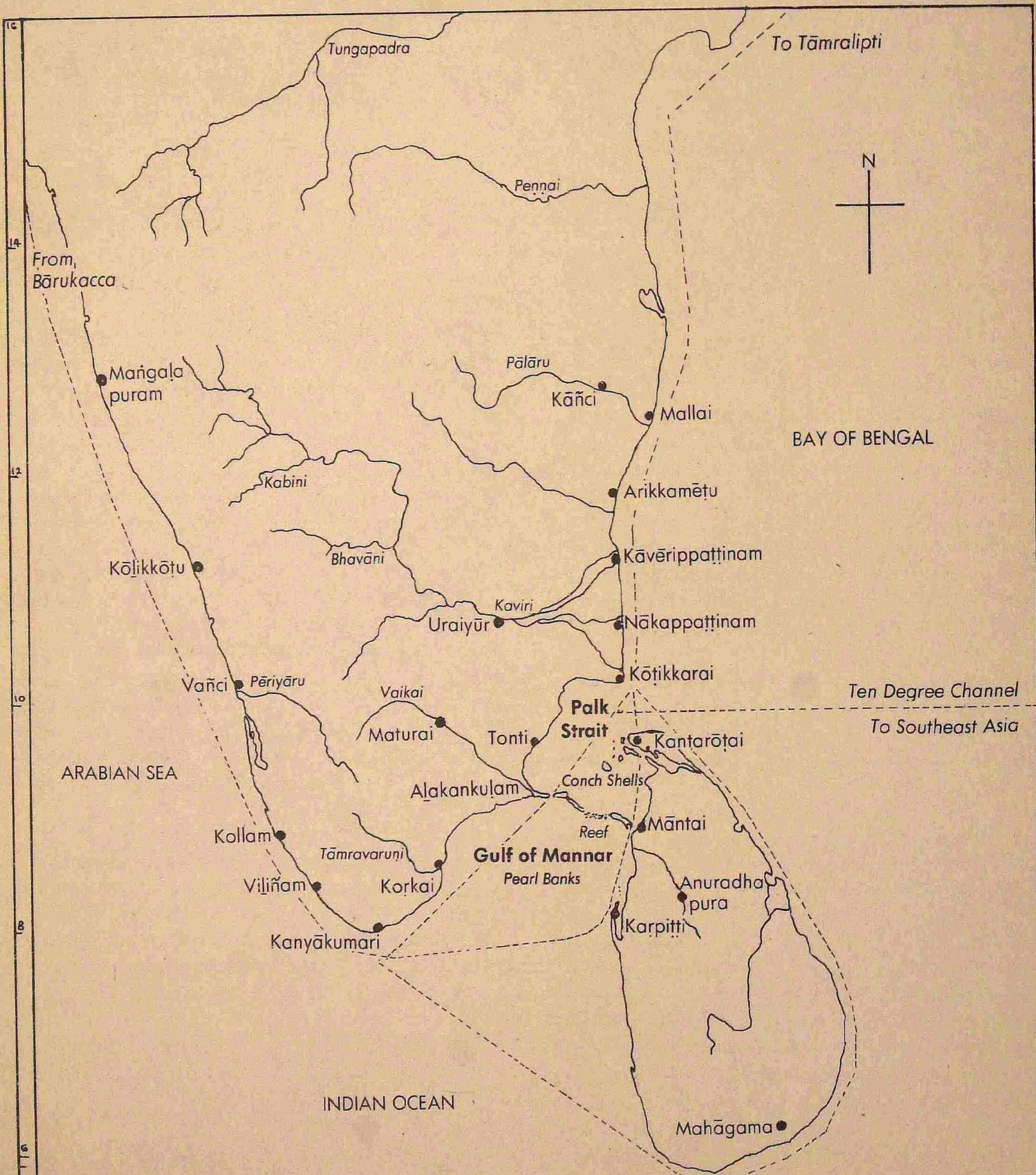
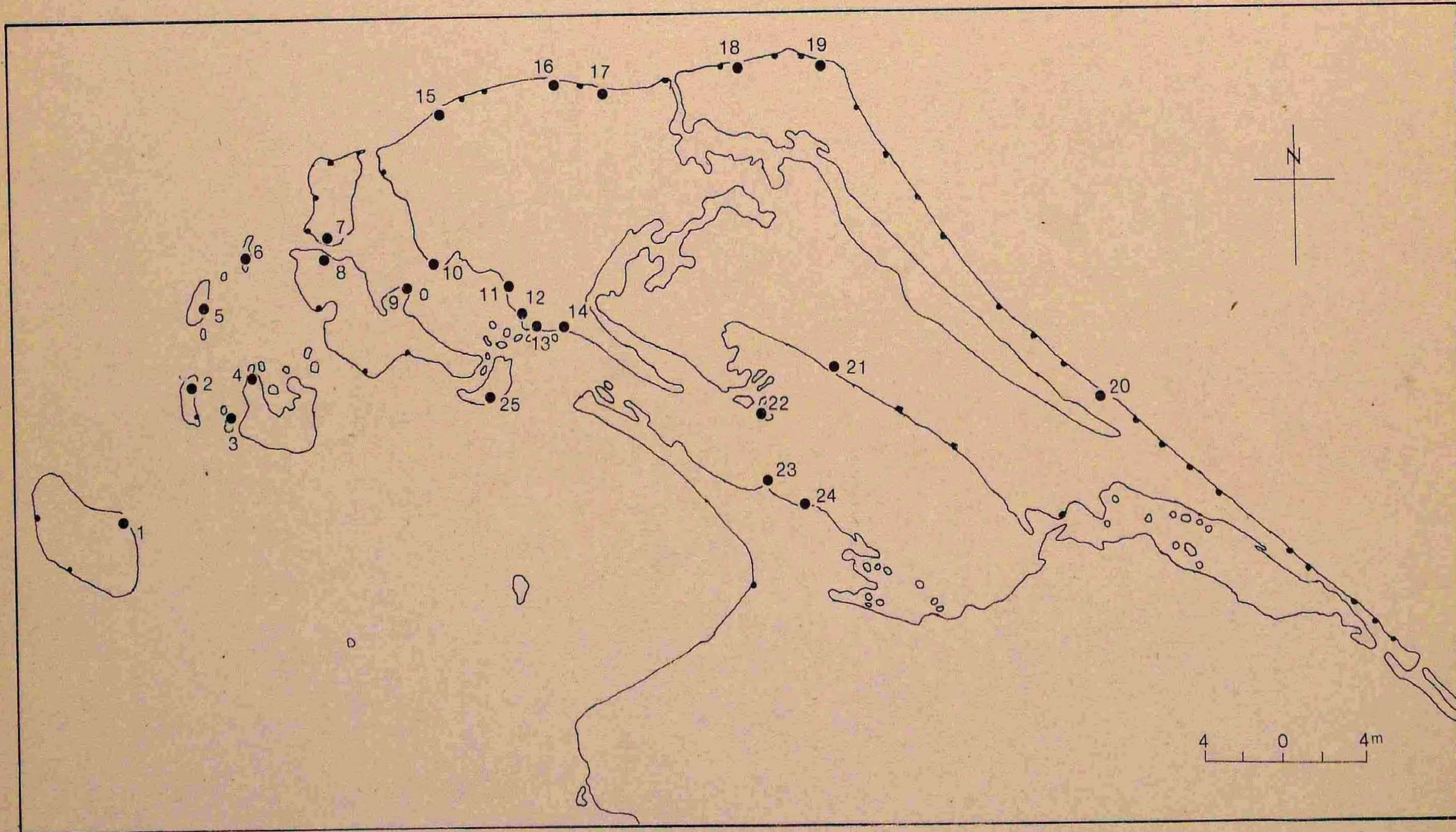


Plate 147 : *Location of Jaffna on the trans-oceanic trade routes.*



Key : 1. Māvalitturai; 2. Nayinātīvu; 3. Kurikattuvān; 4. Kaḷutaippiṭṭi; 5. Aṉalaitīvu; 6. Eḷuvaitīvu; 7. Kārainagar; 8. Urkāvatturai (Kayts); 9. Vēlaṇai; 10. Arāli; 11. Nāvānturai; 12. Paṇṇaitturai; 13. Kurunagar; 14. Koḷumputturai; 15. Mātakalturai; 16. Kāṅkēsaṉturai, 17. Mayiliṭṭi (Vīramāṇikkattēvaṉ and Periyanāṭṭuttēvaṉ turai), 18. Valveṭṭitturai, 19. Paruttiturai (Point Pedro) 20. Tāḻaiyaṭi.

Plate 148 : *Distribution of jetty ports and fishing camps in Jaffna.*

There were equally important sea routes that connected the Peninsula with parts of the main island of Sri Lanka. They went along the eastern and western coasts of the Island. They were in popular use till early British times, and lost their importance with the opening up of modern trunk roads and railways and with the introduction of fast moving vehicles.

Lagoon Routes

A glance at the topographical map of Jaffna, marked with the distribution of its population, will suggest the potentialities of the Jaffna lagoon for internal communication.

The calm and shallow waters of the Jaffna lagoon are capable of providing a number of safe criss-crossing passages among the coastal villages of the Peninsula and of the adjoining islands. The locational and artifactual analysis in this research, led us to suggest certain possible features of early lagoon communication system.

1. The Jaffna lagoon has two northern entrances. One between the island of Kārainagar and Poṉṉālai; the other between Kārainagar and Kayts (Ūrkāvat-turai). The first one is blocked by a causeway between Poṉṉālai and Kārainagar. Even otherwise, it is difficult for navigation at present, because of a growing sand bar at the northern tip of Kārainagar. In our view, this lagoon entrance must have been in use during early times, for we know that the important port of Jambukola (identified with Camputurai) was located here and catered to the needs of Kantarōtai. We do not know whether it was the growth of the Kārainagar sand bar or the fall of Roman trade and Kantarōtai that caused the decline of this port by the beginning of medieval times.

2. The other northern entrance of the Jaffna lagoon i.e. the pass between Kārainagar and Kayts[21] is still in use, and considered strategic, as a fleet of the Sri Lankan Navy is stationed here.

   The possible use of this entrance during the early centuries of the Christian era is indicated by the location of the site Vērappiṭṭi at this entrance. There are ample epigraphical[22], literary[23] and archaeological[24] sources to indicate the vital part played by this pass in the history of medieval Jaffna.

   We venture to suggest that both the entrances mentioned were in use for navigation, beginning from the megalithic times. This we suggest on the basis of two evidences :

   (a) the megalithic culture at Kārainagar, the Island located between the two lagoon entrances, and
   (b) the megalithic culture at Āṉaikkōṭṭai, adjoining the inner reaches of the Jaffna lagoon, to enter which, the vessals should come through either of the above mentioned entrances.

3. A nearby place, south of Āṉaikkōṭṭai, is known an Nāvānturai which means the 'port of vessals' (nāvāi-vessal; turai-port). It seems Nāvānturai succeeded Āṉaikkōṭṭai as an important port in the Jaffna lagoon during medieval times. Literary sources[25] mention this as a strategic port of the kings of Jaffna.

4. The emergence of the city of Jaffna itself is to be attributed to its strategic location along the Jaffna lagoon. It could be approached through the lagoon sea routes from the north, south and west. Presently, within the city limit itself there are three traditional ports namely Pannaitturai, Kolumputturai and Nāvānturai. They are accessible from Kayts in the north and from Pūnakari in the south. At the same time the location provides access to the deep sea routes that come through an entrance in the lagoon between Manṭaitīvu and Maṉṉittalai in the west. Such location leads us to hypothesise an early nucleus settlement below the present city of Jaffna.



Plate 149 : *The ghost port at Kaccāi.*

5. It appears that there was ferry service till recent past between Ariyālai and Maṉṉittalai across the Jaffna lagoon enabling the people to get to the main island.[26] This we discuss in detail later in this chapter. Likewise ferry seems to have connected Kaccāi with Pūnakari across the Jaffna lagoon.[27]

6. Similar ferries possibly existed at many points of the lagoon coast to connect the islands of Vēlaṇai and Maṇṭaitīvu with the Peninsula proper. One such could have probably connected Arāly with Vēlaṇai, thus linking Kantarōṭai with Kumpuṟuppiṭṭi during early times.

7. We did not obtain any evidences of the use of the other lagoons of the Peninsula for early communications. However, later historiographical sources speak of the use of the Toṇṭamaṉāṟu and Uppāṟu lagoons to export salt during Cōḻa times.[28]



Plate 150 : *A traditional deep-sea fishing boat at Maṇaṟ-kāṭu.*

Plate 151 : *Ship building was an important traditional industry in many of the port settlements in Jaffna. Valveṭṭit-tuṟai and Jaffna city were known for this activity till recent times. In 1930s a team from Valvettiṭṭuṟai constructed their own sail and travelled to America. In this photograph, a lagoon fishing boat is seen being constructed at Cāvaṟkaṭṭu, Ānaikkōṭṭai (below).*



Internal Land Routes

In the reports we have discussed the potentialities of the *taravai* grassland tracts for the internal land communication of the Peninsula. They were suitable both for pedestrians and for bullock carts. Internal communication would have not at all been a problem in the arid plains of the Peninsula.

The Peninsula proper, without the adjoining islands, has four traditional administrative districts known as Valikāmam, Vaṭamarāṭci, Tenmarāṭci and Paccilaippaḷḷi. It is difficult to suggest anything on the early inter-district communication of the Peninsula on the basis of location of the early sites mentioned in this thesis.

However, the location of the medieval sites gives a clue to this inter-district communication. The location of the sites of Nallūr, Irupālai, Kōpāi and Mantuvil suggests that a trunk road connecting Valikāmam with Vaṭamarāṭci went along the Uppāṟu lagoon, and the road crossed the lagoon near Mantuvil through a natural ford. From Mantuvil, through Varaṇi, the route could have reached the Vaṭamarāṭci sand bar settlements.

Likewise, Vaṭamarāṭci could have communicated with Tenmarāṭci through the line of sites — Varaṇi, Mantuvil, Vērakkatu and Kaccāi. Mantuvil seems to have acted as a junction in this inter-district communication system.

An archaeological source to trace the internal land communication is the remnants of *maṭams* situated along the highways. These wayside *maṭams* served as rest houses for pedestrians as well as caravans.[29] In Jaffna, a wayside *maṭam* actually combined five features.

1. A simple structure for the travellers to take rest.
2. A well, providing perennial, saline-free, water.
3. A water-tub usually chiselled out of the Jaffna limestone. This water-tub was mainly for the use of cattle.
4. An *āvurañcikkal*,[30] an erect stone of Jaffna limestone in the shape of a *Sivalinkam,* for the cattle to rub their bodies.
5. A *cumaitānki* — a platform for the travellers to keep their head load.





Plate 152 : *Āvurañcikkal and turavu-well, Māṭṭoḷuṅkai road matam, Navāli.*

Plate 153 : *Road-side 'maṭam' complexes, which served as rest houses for the caravan traders, became neglected with the advent of fast-moving vehicles. It is of sociological significance to note that at many instances such 'maṭams' were converted into community centers. Seen here is an abandoned 'maṭam' at Māṭṭoḷuṅkai road, Navāli.*

With the introduction of vehicles powered by steam and petroleum, the wayside *maṭams* lost their importance and were abandoned. Ruined *maṭam* complexes can be seen throughout Jaffna indicating highways that went along.

Anyhow, in the case of our research, depending on these evidences for the reconstruction of early communication is not reliable because of the problems of establishing the chronology of these wayside *maṭams*. The practice of constructing them continued to modern times.

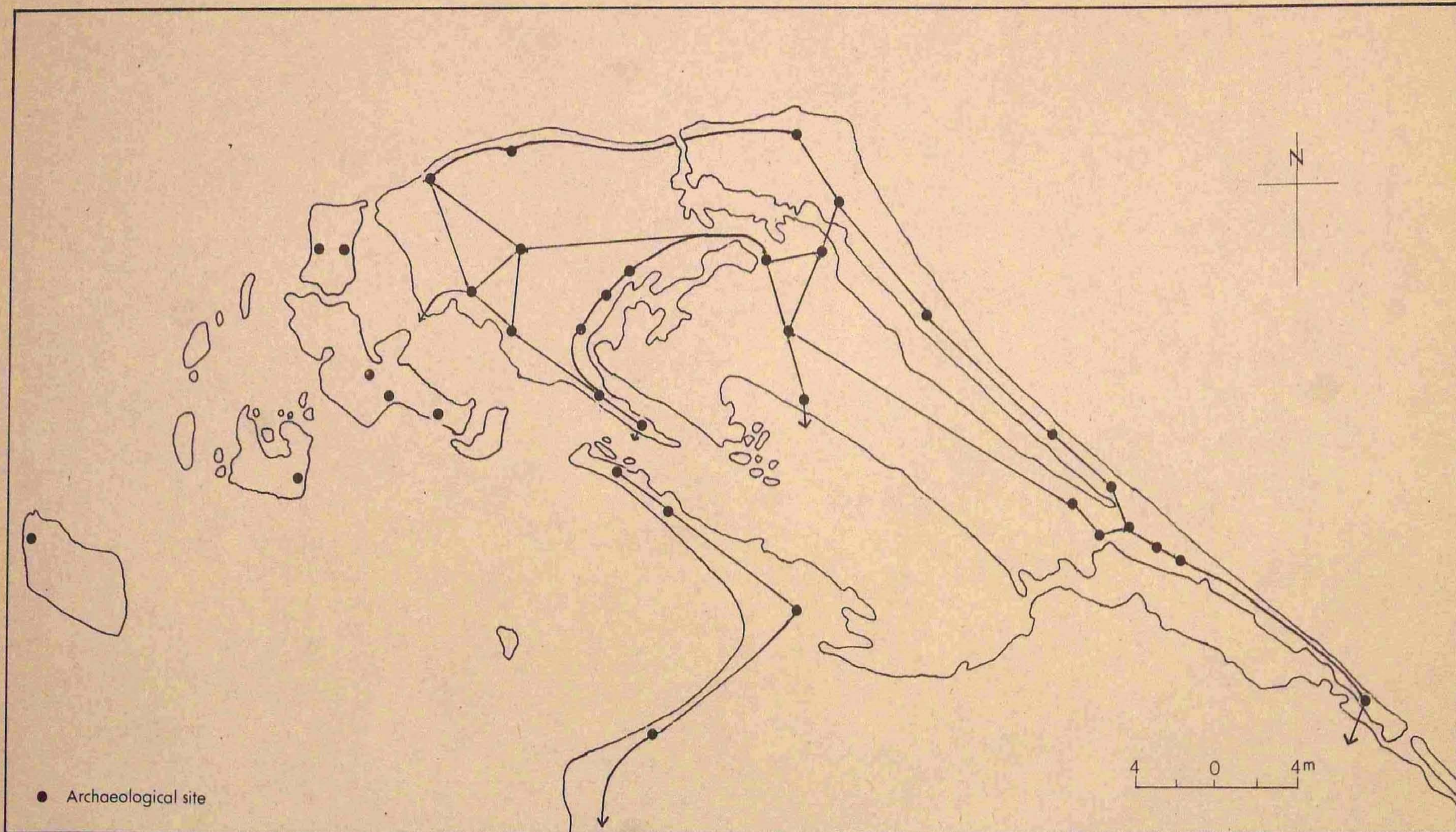


Plate 154 : *Reconstruction of the early communication network in Jaffna.*

The two major routes that linked the Peninsula with the mainland of Sri Lanka.

It is quite obvious that the present major transportation links between Jaffna and the main Island of Sri Lanka,i.e., the Kandy Road and the railway line, do not connect the traditional settlements of these regions in their course. It was the British, who developed this Colombo-centric communication system which eventually led to the decay of the old routes, affecting the traditional settlement and subsistence patterns of these regions.

There are no substantial indigenous literary records in Tamil[32] specifically helping us to reconstruct the routes extant at the time of the kingdom of Jaffna or prior to that. It is only in the Portuguese records[33] that we come across the description of two major caravan routes connecting Vaṉṉi with Jaffna. They were the Koḷumputuṟai ferry, and the Paccilaippaḷḷi sand-pass. They are mentioned in the context of levying a tax for the use of these routes which the Portuguese records claim was a practice of the native Tamil kings and was continued by them.[34]

The extracts from the Portuguese references,[35] describing these routes are given below, to give an idea about transportation activities in the mid 17th century.

The Columbogam Ferry (Passo)

"This ferry connected the Peninsula with Punarin[36] and the Renter of the ferry was also Adigar of the port of Colomboturai. All passengers to and from the mainland, as well as all the fishermen living in the port, paid to him the customary dues, which were as follows" :

"Every fishing dhoney paid for every day it went out fishing, one large cash (*caixa*) of which fifteen went to the *fanam*. Passengers from either side making the use of the ferry paid same. Cloth which has been already declared at the Customs and which was meant for coastwise transport, paid no further duty here, but otherwise it was treated in the same manner as at the Paccilapalai Passe cattle were not taken across at this ferry; all other commodities had to be taken to the Customs. Foodstuffs conveyed on men's back paid half a *marca* for each load."

The Sand Passes

"These led from Paccilaippalli to the Vanni, and the Customs in force under the Tamil Kings were continued in respect of them".

"No goods could be moved through them unless properly declared, and, if cloth, duly stamped. If in order, the merchants paid for each *cacha,* quarter *fanam;* for seventy white head cloths, one *fanam,* for opium, quick-silver, China wood, cloves, nutmeg and suchlike, 8% of their value".

"Goods brought from the Vanni paid : for each oxload of cotton, a quarter of fanam, and for every six oxen laden with *varago,* one fanam".

"In the time of the native kings the inhabitants of Pachchilapalai and Illidematual[37] used to go to the Vanni to cultivate *camas*[38] there and would pay to the renters from ten to twenty *lachas* of foodstuffs for each *cama*, in accordance with its size. A large proportion of these lands had since been given to the Portuguese, who took the dues there from, and the bulk to these same natives; with the result that, when the produce came to be conveyed to the Kingdom, it was difficult to ascertain to whom it belonged".

"Thereupon Lancarote de Seixas when he rented out the passes, gave orders that all grains taken over them should pay a *fanam* for every four oxloads; this regulation was now continued, except in the case of produce brought by water to the town, when foodstuffs paid nothing. All other goods coming by the Passes, such as wax, ivory, musk etc., paid to the renter 8%, *areca* paid two *fanams* the *amunam* of twenty thousand nuts and *sapan* 8%".

The position of the Dutch forts along the routes discussed, confirm the popularity and continuity of these routes mentioned in the above Portuguese records. They had a fort at Punakari guarding the Kolumbuturai ferry route and two forts at Paccilaippalli guarding both the coastal and the interior tracks.

We have attempted here through archaeological methods to confirm the existence of these routes during pre-portuguese times, and to establish their antiquity.

The Ferry Route — Locational Analysis

During our field surveys, archaeological sites were located at the corresponding points of the probable ferry stations both in the main Island and in the Peninsula. There are two sand bars, Ariyālai East in

the Peninsula and Maṇṇittalai in the mainland, which run parallel to each other and are separated by a narrow and shallow stretch of the Jaffna lagoon.

This location has few geographical advantages other than being the nearest point to connect the mainland with the Peninsula.

As at present, even in the old days, the Valikāmam sector of the Peninsula was the most densely populated area.[40] The location of this ferry station would have made it the natural choice for people wanting to go to the main island, because of its proximity.

These sand bars provide perennial, saline free, fresh water at shallow depths, which is an essential criterion for the location of the ancient caravan routes. The location is also suitable for foreign contacts through the sea routes.

The Sites

In our opinion, the ferry mentioned in the Portuguese records at Colombogam near Koḷombuturai must have been at Ariyālai East, for archaeological sites are located near Maṇiyamtōṭṭam and near the Aiyaṉār temple in Ariyālai East. Both were exposed recently by the sand scoopers in their rush to cater to the needs of house construction in the Peninsula.

The Aiyaṉār temple site from which the mainland looks picturesque, yields early type of pottery like the Historic Black and Red, Thick Rim Red Ware and structural remains like stone slabs, socket stones of pillars, grooved tiles etc.[41]

In the corresponding side of the mainland, Maṇṇittalai, an early site was located at a place called Koṭṭuppaṇivu just opposite the Aiyaṉār temple site at Ariyālai East. This Koṭṭuppaṇivu site could be placed on par with the earliest settlements of the Peninsula, since a few pieces of Early Carinated Black and Red Ware sherds have been found here. It also revealed structural remains like socket stones, grooved tiles etc.

The whole sand bar of Maṇṇittalai was found to be distributed with potsherds and other artifacts, but they are later than the Koṭṭuppaṇivu findings, ranging from post-Christian pottery, Chinese and Islamic ware sherds to Portuguese, Dutch pottery and fragments of smoking pipes.[42]

Some interesting items among the surface collections were a few pieces of microlithic flakes and cores of quartz and chert which indicate human activity in this area right from prehistoric Mesolithic times. This view is strengthened by the presence of the Maṇṭakkal Āṛu microlithic site, only a few miles south from this stretch.

A recent survey we did along with the Department of Archaeology in August 1982 confirms the continuity of this route along the western coast towards the south. In that survey we located more than fifteen sites almost at regular intervals between Pūnakari and Māntai.[43]

Chronology

The earliest artifactual evidence i.e. the microlithic tools, we get in the Mainland side of the ferry, do not confirm whether the Mesolithic people used this route to enter the Peninsula, as no Mesolithic settlement has so far been located in the Peninsula. But the possibility of this route having been used by them cannot be ruled out unless definite evidence to the contrary is established by surveying the Holocene sand-dunes of the Peninsula.

The pottery analysis at both the points of the ferry stations fixes a lower date for the route around the dawn of the Christain era, if not earlier. Artifactual evidence points out its continuity in time, throughout, till the early British times when we find an abrupt end of activities. This fact is well revealed by the ghost buildings of early British times we find at Ariyālai East, and at Maṇṇittalai.

Paccilaippaḷḷi Sand Passes : Locational Analysis

The Paccilaippalli sandy stretch is a narrow link of dune-sands along the eastern coast separating the Jaffna lagoon from the Bay of Bengal. As the only land link between the Peninsula and the main land, this could have been the natural highway for the travellers, particularly preferred by the caravans.

The route linked the northern ports of the Peninsula with the heartland of Vaṉṉi. Just as the Ariyālai ferry served the densely populated areas of the Peninsula, the Paccilaippaḷḷi route served the densely populated areas of Vaṉṉi, i.e. the Mullaitīvu district. Legends regarding the migration of the Vaṉṉi chieftains always center around the Paccilaippaḷḷi Pass and around the northern ports of the Peninsula.[44] This was actually a passage for the people of Vaṉṉi than for the people

of the Peninsula. Like the ferry route, this passage also provides perennial, saline-free, drinking water all through the stretch, in the *turavu* shallow wells. This route has to pass through the marsh lands which are seriously affected by floods during rains. By summer, they become excellent *taravai* cart tracks. In its present natural conditions, a bullock cart will traverse this pass better than any motor vehicle.

The Sites

An exploration in this route from Vallipuram in the north to Cālai near Mullaitīvu covered the following sites: Vallipuram, Kutattaṉai, Nākarkōyil, Tāḻaiyati, Vettilaikkēni, Maṇṭalāi, Kōyilvayal, Nittiyavettai, Taṭṭāṉ-kōṭu, Kuyavanpiṭṭi near Cuṇṭikkuḷam and Papparavap-piṭṭi near Cālai[45] (the reports are included in chapter three).

Besides these sites, almost the whole of the stretch was found to be dotted with potsherds and other artifacts. The reason for this heavy distribution of a number of artifact-rich rich sites in a narrow sandy stretch could only be attributed to its being on the trade route and to its contacts with maritime trade. There is no rich agricultural hinterland.

Among these sites, Vallipuram, Nākarkōyil and Vetti-laikkēṇi seem to have had a long continuity as revealed by their artifacts. The Vettilaikkēṇi archaeological site and its neighbouring satellite sites of Paccilaippaḷḷi should be discussed in detail as they are in the key location of the pass. Nearly six sites were located in the scrub forest around Vettilaikkēṇi.[46]

The marsh land that separates the Peninsula from Vaṉṉi begins south of Vettilaikkēṇi so that this location



Plate 155 : *A bullock-cart traversing the forgotten east coast caravan route near Papparavappiṭṭi, Cālai. With the opening up of the Kandy Road through Elephant Pass, in the British times, this once flourishing ancient route was reduced to a fair-weather tract, accessible only to bullock-carts and pedestrians.*

could have acted as a market centre and would have been the first settlement of contact for the people coming from Vaṉṉi.

The fact that this location was a market centre till recently, is testified by the British map prepared in the beginnings of this century, marking nearly a square mile in this area, north of Vettilaikkēṇi, as 'Fair Place' (see Paccilaippaḷḷi site map).

The Vettilaikēṇi site yielded a variety of sherds like the Rouletted, Historic Black and Red, Thick Rim Red, Chinese, Islamic and in the last phase, Dutch and early British wares and tiles. A rich collection of beads and early coins were also obtained from here. The other Paccilaippaḷḷi sites in the hinterland of Vettilaikkēṇi provided mostly medieval pottery and coins ranging between eleventh and thirteenth centuries.

It must be on account of the importance of this location that the Dutch constructed two forts, one on the top of an earlier archaeological site at Vettilaikēṇi and the other, at Kōyilvayal which is also another earlier archaeological site two miles west of Vettilaikēṇi.

Chronology

The origins of this route seem to be comparatively later than the ferry route. On the basis of the earliest pottery available, the lower date for this passage could be assigned to the early centuries of the Christian era. It was only during the medieval times that the route seems to have witnessed full-fledged activities. This was the time when the Vaṉṉi region, particularly the Mullaitīvu district, was inhabited by waves of migrants from south India, who eventually established chieftaincies at Vaṉṉi. The Paccilaippaḷḷi route seems to have been an artery for these migratory and trading activities in Vaṉṉi.

The archaeological evidences show that this route was connected with Nallūr through Mantuvil, near Varaṇi, where there is a natural passage to cross both the Uppāṟu and Toṇṭamaṉāṟu lagoons. The archaeological finds in these places confirm the route taken by Caṅkily when he fled to Vaṉṉi during the Portuguese occupation.[47]

After flourishing during the Dutch and early British times, the route was almost abandoned around the mid 19th century, and the remnants of the period of prosperity could be seen as ghost buildings. Still there are people at Paccilaippaḷḷi who recollect their grandfather's tales about the market places and the caravans of buffaloes which passed along that way.

The archaeological knowledge of these two extinct routes has shown us how they were vital for the settlement pattern and for the economic activities of Jaffna and Vaṉṉi. At least the importance of one of them is now realised and it is being reconstructed as Mahādēvā Tāmbōti.

Subsistence Patterns



Plate 156 : *Catching prawn in the backwaters near Tiruvatinilai. A basket known as 'pari' is kept along the chest to keep the catch. Note the palmyra leaf cap , a traditional attire of the fisher folk in Jaffna.*

The subsistence pattern of a region at a given time could be perceived as an outcome of the interaction between the then available technology and the environment. Archaeological reconstruction of the subsistence pattern of a region needs systematic excavations at various sites and sophisticated analysis of the finds. Disciplines like palynology, palaeobotany, zoology, palaeoecology, etc. can help in reconstructing the patterns.

But as often pointed out in this work, such techniques were out of reach for us. Hence, the pattern we discuss here is more or less a subjective reconstruction, based on as much information as possible, extracted from the finds and from the locational analysis. A few sources that helped us to reconstruct the subsistence patterns are listed below.

I. The location of the explored archaeological sites when correlated with their immediate environment revealed the possible reasons why the location was selected and this, in turn, shed light on the subsistence patterns of the sites.

II. The artifacts available as surface finds during our explorations.

III. Fortunately for the Megalithic phase, the two burial sites excavated, provided objective evidences. At both these places the Megalithic pots and bowls contained a variety of food items and other artifacts as burial offerings. However, the rescue nature of our excavations did not allow us to go for a careful and more minute investigation and preservation of those finds. Till date a scientific analysis of these food items has not been done in view of our limited resources and facilities.

IV. Another potential source is the study of the surviving folk subsistence activities, which could be called ethno-archaeology. The Megalithic burial finds could be better explained and understood, if one observes the ceremonial offering of food and other items of daily use during the last rites conducted for the dead in the Peninsula. Another example of ethno-archaeological application is the study of the abundant availability of oyster conch and snail shells, in the sites. Survivals of the practice of using them for food by the poor and folk communities of the Peninsula could still be observed.



***Plate 157** : Kuruvita excavations conducted by S.U. Deraniyagala in the Ratnapura district has revealed that fresh-water snail pila was a major food for the microlithic people. Though it is not considered a food now, we have found this young lady from Neṭuntīvu, Jaffna, who shyly admitted that she consumes them, adding that it is good for health. Similarly, another early food oyster, locally known as 'maṭṭi', for which evidences have been cited at the Maṇṭakkallāṛu microlithic site and at the early settlements in Jaffna, has become a poor man's food nowadays.*

Megalithic Subsistence Patterns

With the brief introduction on the sources, let us deal with the reconstruction of the subsistence patterns.

Material evidences from the two Megalithic sites have helped us to reconstruct that these early settlers had a multi-faceted subsistence pattern. It was a combination of lagoon fishing, incipient farming and pasturing.

The Jaffna lagoon must have played a vital role in the subsistence of the early settlers. The lagoon was not only a safe area for their operations but its exploitation was also within their technological means. The identifiable aquatic remains obtained in the Megalithic burials include shark vertebrate bones, other fish bones, crab shells, turtle shells, oyster shells, conch shells, snail shells, etc., obtained in plenty.[48]

The current folk practice of exploiting the lagoon in the Peninsula is a continuation of earlier modes. One could still find women folk, with palmyra-leaf caps on their heads, catching prawns and other lagoon items with only their hands.

Today one finds various techniques used for catching fish and prawns in these lagoons, namely, *Karappu* method, using a cane basket, *cūḻ* method in which a

torch is used for night fishing, etc. At least some of these methods must be survivals of primitive techniques.

The pasturing subsistence of these early settlers is testified to by the animal bones found as remnants of the food offerings in the Megalithic burials.[49] They included several specimens of cattle bones which were easily identified. Some of the bone remains had sharp cut marks, indicating slaughter. Goat and Sheep bone remains were found comparatively in large numbers. The bone specimens may also include the remains of wild animals which were then found in the Peninsula and were hunted. No wild game could be seen in the Peninsula now, except rabbits and boar in a few remote pockets. However, we can be more definite only after a specialised study of the bone remains.

No seed remains were isolated during our rescue excavations, but we were able to speculate at least about an incipient type of farming on the basis of the location of those early settlements as they are all located in the traditional paddy fields of the Peninsula. The environmental advantage of this location for incipient farming is discussed elsewhere in this thesis.[50]

We assume that the environmental suitability of such a combined subsistence pattern was the reason for the Megalithic settlers to select this location for their rudimentary settlements.

The significance of Arikkan̲ Caṭṭi

Concerning the cultivation of food grains in post-Megalithic times, an interesting phenomenon was observed in our survey. A special kind of pottery known as *arikkan̲ caṭṭi* was found distributed in the archaeological sites dated from the dawn of Christian era. This ware originated as a sub-type of Thick Rim Red Ware, later became Grooved Rim Ware and it still survives in daily use. The function of this ware is to separate stones from food grains. The ware has innumerable thin grooves covering the entire interior. They are of specific pattern, either grill lines or wavy lines. Even these patterns survive today. When rice needs to be cleaned, it is put into this ware along with water. The ware is held in hand, swinged rythematically, and the water is poured out along with rice into another vessel. The stones stay at the bottom of the ware. The process is repeated until all the stones are removed. The ware was never found in association with the Megalithic ECBRW. The appearance of this ware in the archaeological sites from the dawn of Christian era, clearly indicates the increased production and consumption of food grains, especially rice. This phenomenon was observed throughout Sri Lanka and coincides with the post-Christian developments in tank irrigated agriculture.

Trade

Trade seems to have already begun during the Megalithic times in the Peninsula as items like Roman coins, Lakshmi plaques, Rouletted Ware and Carnelian beads were obtained in these early sites.

It seems, trade became a major subsistence activity from the dawn of Christian era onwards because of the location of the Peninsula on the major trade routes both South Asian and trans-oceanic. . Glass beads, foreign wares and medieval coins were found in plenty in the later settlements situated along these trade routes. The reconstruction of these routes has already been discussed.

It seems foreign trade was comparatively prosperous during the times of Roman contact But there is a marked deterioration after 5th century A.D. The focus of the medieval Arab-Chinese trade was not on Jaffna but was on Mantai in the Mannar District.

Iron Technology

The iron technology needs special mention in this context as this technology was vital for the very emergence of the Megalithic culture and its subsistence patterns. The iron implements were found widely distributed in the Megalithic and in the subsequent early historic sites. Whether these tools were produced indigenously from a local ore, or imported from outside is a matter to be confirmed.

However, smelting/melting of iron was evident right from the Megalithic times as testified by the presence of a large number of iron slags found in the sites and in the excavation trenches. We tend to believe that the local iron-containing laterite, found in the Peninsula and in the Van̲n̲i could have been used as the raw material. Many of the medieval sites in Van̲n̲i are invariably located in the vicinity where the metalic laterite is found on the surface. The early settlers could have evolved a primitive technology to extract iron from this raw material, which may not be commercially profitable in the modern times. A. Moothoothamby Pillai (*History of Jaffna*, 1912, P. 105) refers to indigenous production of iron in Jaffna, which was known as '*Ilam* iron'.

Conch Shell Diving

The Jaffna peninsula and the adjoining islands are situated in a continental shelf of less than five fathoms deep. As a result, the Jaffna lagoon and the sea of the adjoining islands provide the best waters in Sri Lanka for conch shell diving. There were direct evidences that conch shell meat was used as food in early Jaffna. Conch shell was also a precious trade item in ancient and medieval times, and was used to make bangles and other ornaments. Most probably conch shell diving for commercial purposes was a subsistence activity during the span of time covered by this research. This can be envisaged on the strength of the following points : (a) the presence of innumerable conch shells in the early sites as well as in the stratified layers of early phases in the excavated sites. Some of the sites were seen with cut conch shells, the wastes in bangle production; (b) till recently conch shell was a major export item from Jaffna especially from the port of Ūrkāvatturai (Kayts). Heaps of discarded conch shells can be still seen at this port. Even today a limited number of shells are being exported by a contractor at Āṉaikkōṭṭai to Bangladesh; (c) Jaffna, in its caste structure, has a community of conch shell divers known as *Mukkuvar* (who hold their breath), who have now turned towards fishing, as the conch shell trade has now declined.

Palmyra

The pride of the Peninsula, the palmyra, must have certainly played a role in the early subsistence pattern. But unfortunately we were unable to get any material evidence for its use. The best way to understand the role of the palmyra seems, is to look into the folk food habits and palmyra based cottage industries. Ample ethno-archaeological evidences can be sited in this regard as Jaffna still retains a community in its caste structure known as *Naḷavar* (toddy tappers) whose subsistence is based on palmyra.

Miscellaneous

Another natural vegetation of economic importance about which we get literary records, is the *chāya* root or *sivanār vēmpu*. This root was used to extract a saffron colour dye which was an important item of export during the Portuguese and Dutch times. The Portuguese records refer to the existence of this *chāya* industry as well as weaving in the times of the Tamil kings.[51] Even the king of Jaffna was then known to them as *'Chāya Raja'*. It is interesting to note that a few of the early sites and many of the medieval sites were found in areas where the *chāya* root was common in the natural vegetation.



Plate 158 : *Palmyra leaf straps for preparing various household items.*

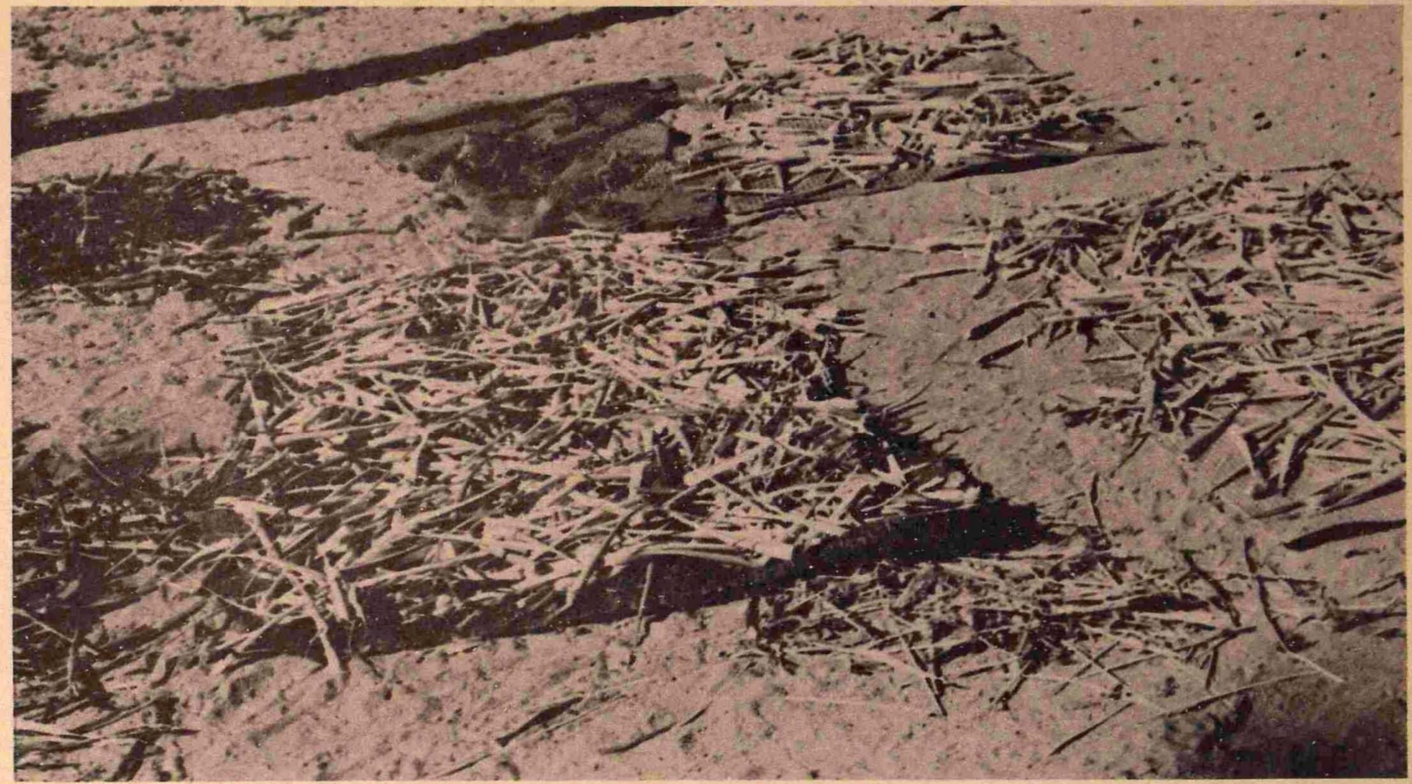
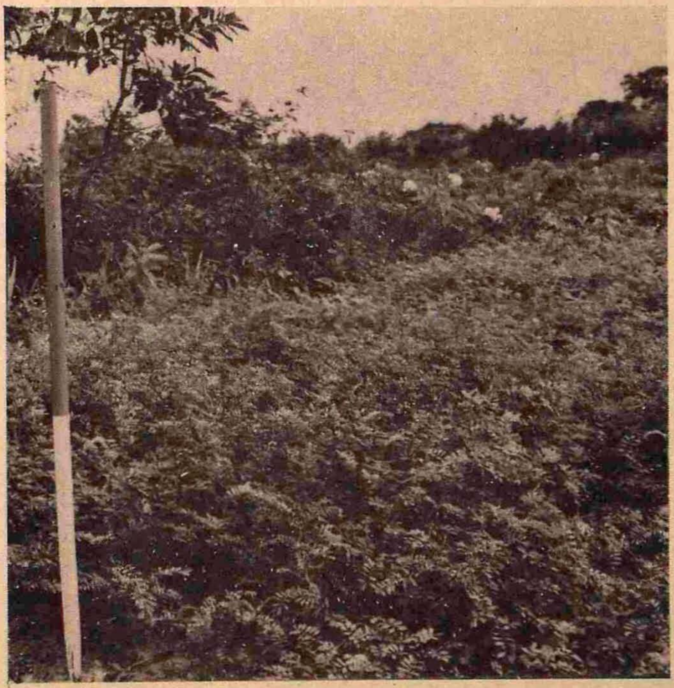


Plate 159 : *The palmyra root is considered a delicious food in Jaffna. The root, when dried raw, is known as 'oṭiyal' and gains the name 'Puḻukkoṭiyal', if boiled and then dried. Photograph taken at Paruttittīvu, off Jaffna.*

Plate 160 : *'Cāya' root as natural vegetation. Āṉaiviḻuntāṉ, Iḷavālai.*



In the social structure of Jaffna, there were specific sub-castes, known as *Vērkkutti Paḷḷar* and *Vērkkutti Paṟayar,* involved in the *chāya* root digging and *Chāyakkārar,* a sub-caste of *Vaṇṇār* (washermen) dyed the clothes. Weaving was done by a section of *Paṟayar* or *Vaḷḷuvar*; *Ceṅkuntar* or *Kaikkōḷar* (who were also known as soldiers in the time of the *Cōḻas*); and by *Cēṇiyar.* The presence of such a number of sub-castes and their distribution point to the importance of textile industry in early and medieval Jaffna. The *chāya* root industry declined with the advent of chemical dyeing. The use of the medicinal plants in the Peninsula was popular during the times of the kingdom of Jaffna, as testified by the medical books of the medieval times based on the indigenous medical traditions of the region (works like *Cekarācacēkaram, Pararācacēkaram* etc).

Evidences are available for two more early industries; one, production of beads, indicated by a number of uncut stones and flakes found in the sites. The other was coral and limestone architecture. The Peninsula seems to have indigenously mastered the art of using this abundant architectural material right from early times which was later encouraged by the Dutch.



The Development of a Central Place

Kantarōtai[52] has been identified as the regional central place of the Peninsula in the early times, for the following reasons.

1. Kantarōṭai is the largest early archaeological site in the Peninsula as evident from the spatial distribution of artifacts.

2. This is the richest site in terms of the concentration of structural remains and artifacts, compared to any other early site in Jaffna.

3. Foreign trade items, coins and luxury articles are found in large quantities at Kantarōṭai, indicating that it was the commercial centre of the region. For instance, the site yielded the best quality Rouletted Ware in abundance while only a small number was collected from the other sites.

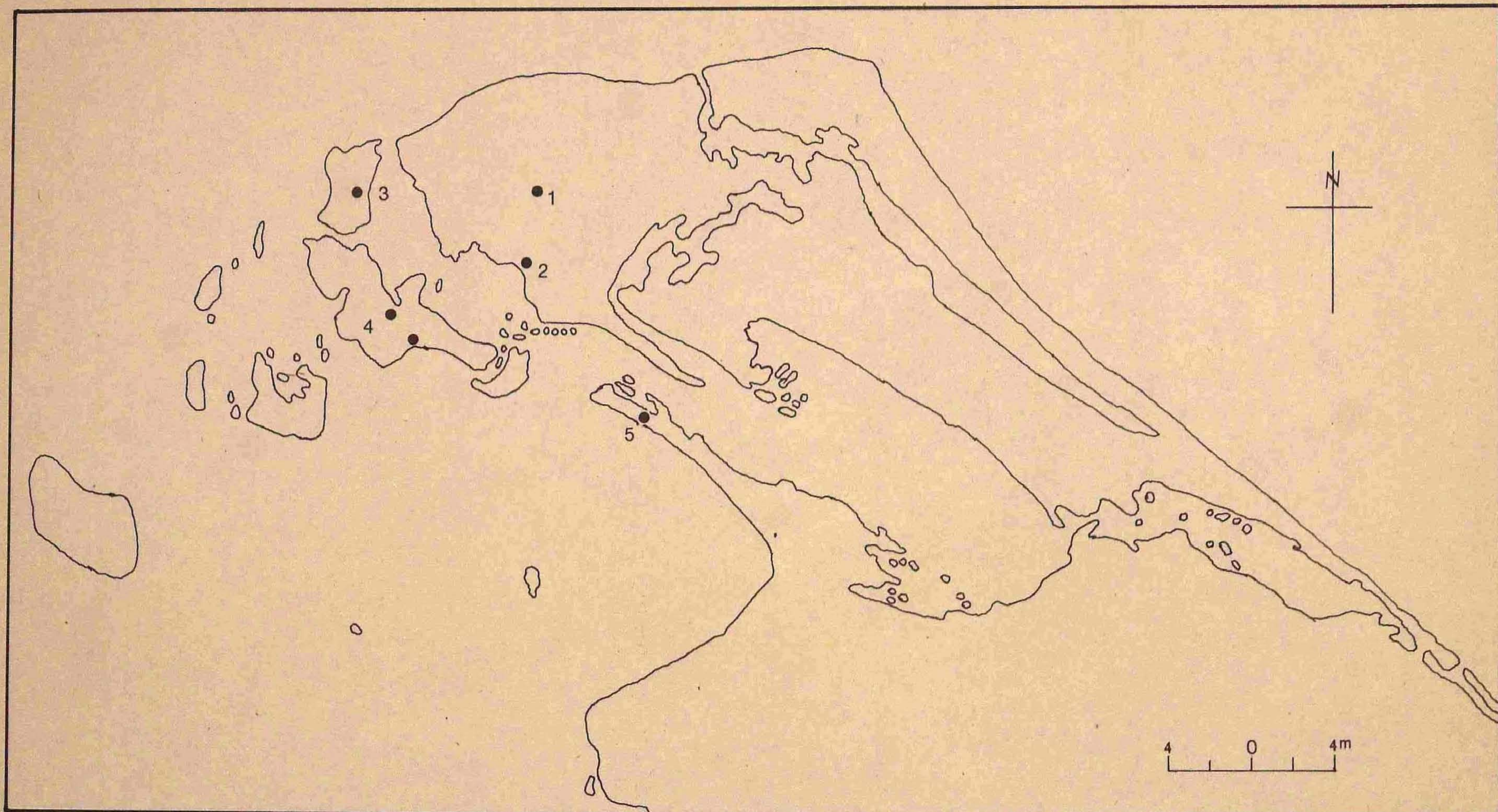
4. Kantarōṭai seems to be the only urbanized settlement in early Jaffna. It emerged parallel to the other early South Indian and Sri Lankan urban centres.

5. The location of Kantarōṭai is the most potential one in the Peninsula with its tanks, drainage and the paddy field belt. The location possesses the capacity to support the necessities of a central place in a region like Jaffna.

6. As far as the archaeological evidences point out, Kantarōṭai was the most popular early religious centre in the Peninsula, with a number of religious structures.

7. Even in time range Kantarōṭai is significant as its continuity could be traced from 500 B.C. to the beginnings of the kingdom of Jaffna.

Plate 161 : *The stupa-complex at Kantarōṭai. The stupas belong to different phases from the early centuries of Christian era to the medieval times. They were constructed by coral and limestone locally available in Jaffna. The relationship or overlapping of these monuments with the earlier Megalithic phase at Kantarōṭai is yet to be fully understood. The unique layout of this complex may imply Buddhicised Megalithism. The stupas seen in the photograph are recent reconstructions by the Sri Lanka Department of Archaeology on the original bases. There are a number of such bases in the entire area waiting to be excavated.*



Key : 1. Kantarōṭai, 2. Āṉaikkōṭṭai, 3. Kārainagar, 4. Vēlaṇai-Cāṭṭi, 5. Maṇṇittalai.

Plate 162 : *Settlement pattern in Jaffna — phase I (c. 500 B.C. — c. 100 B.C.)*

Phases of Settlements

The location of the archaeological sites and the chronological sequence developed, reveal the continuity of human habitation in the Peninsula at least for the last two thousand five hundred years. The settlement and subsistence patterns are classified here into four phases, presented with relevant maps, to understand the growth of settlements and the demographic changes in the Peninsula.

Phase I

In this phase which may be called the rudimentary phase of settlement, the following five sites of which the first three with certainty, can be assigned : Kantarōṭai, Āṉaikkōṭṭai, Kārainagar, Vēlanai and Maṇṇittalai.

The major aspect of this phase was self-sufficient settlement units with multi faceted subsistence patterns. It was a combination of farming, pasturing and lagoon fishing. Culturally the phase is identified as Megalithic though it overlaps with the early historic period of the first three pre-christian centuries.

There were evidences of writing at the early historic stages and linguisticaly, elements of both proto-Dravidian and Prakrit were found. The religious beliefs were similar to those of the Megalithic south India. Though literary sources claim that Buddhism arrived in 3rd century B.C. to Jaffna, it was not evident in the Megalithic post 3rd century B.C. stratum, which means Buddhism had yet to gain popularity.

An important factor is that the settlements were centred around the Jaffna lagoon. Chronologically the phase is pre-christian, extending into at least 6th century B.C.

Phase II

This is a secondary phase of the settlement pattern in the Peninsula. Chronologically it emerged around the dawn of the Christian era and continued into the first few centuries upto circa 5th century A.D. In this phase the number of settlements increased. Important new settlements emerged along the eastern coast and in the islands. A clear regional pattern evolved with settlements of specific activities. Kantarōṭai emerged as a central place or urbanized capital of this pattern.

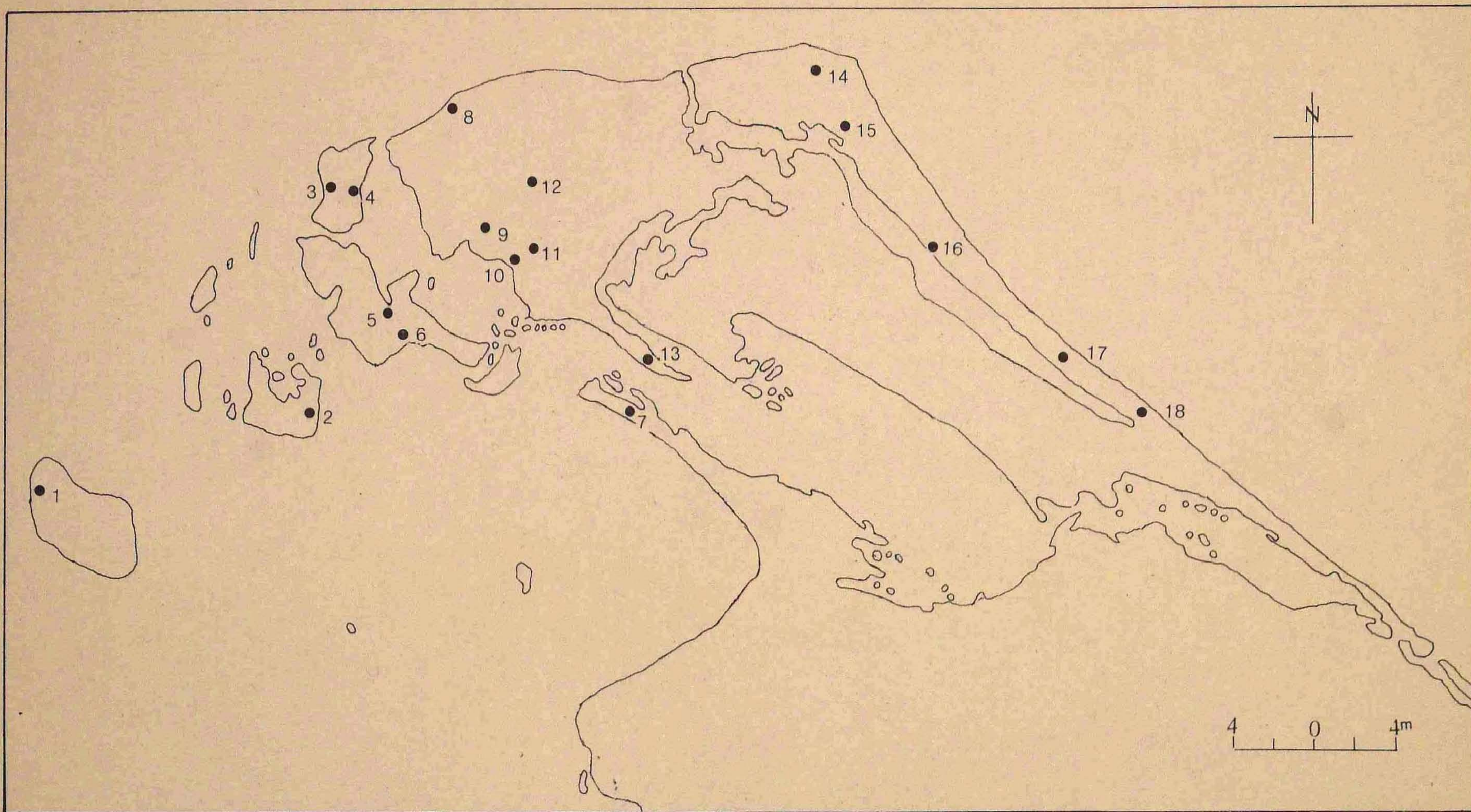
There were new trends in the economic activities which included the increase and surplus in cultivation, the development of trade and trade routes. The Roman trade brought in an economic boom and the resultant urbanization and political growth of Kantarōtai paralleled those of Anuradhapura and Mahāgama.

The outcome was the elevation of the Peninsula to statehood or to at least to a principality. Both the Tamil literature and Pāḷi chronicles mention Jaffna (Nāka nāṭu or Nāgadīpa) as a political unit of itself, during this phase.

Another development was the advent of an institutionalized religion i.e. Buddhism. The Buddhist structures of Jaffna have many localized elements in their concept and material and are strikingly unique compared to the Buddhist monuments of the south.

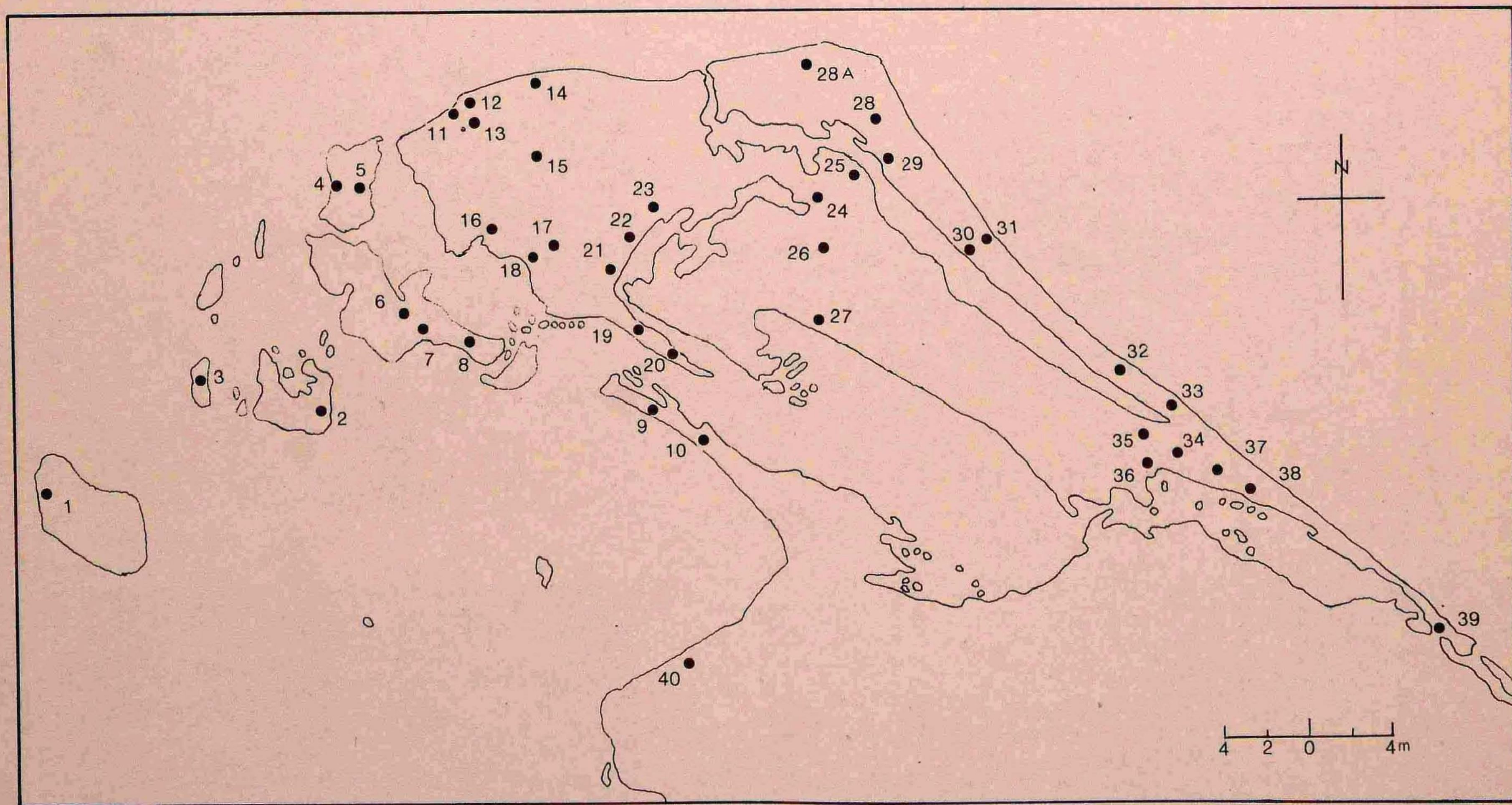
Phase III

This phase marks a deterioration of the previous pattern. Chronologicaly the phase began around c. 5th century A.D. and continued upto c. 10th century A.D. By 5th century A.D., the prosperous Roman trade ended and it seems, the settlements of Jaffna had been affected by this. The subsequent foreign trade i.e. the Arab-



Key : 1. Veṭiyaracaṉkōṭṭai, 2. Tikaḷi, 3. Vērappiṭṭi, 4. Cattirantai, 5. Vēlaṇai, 6. Cāṭṭi, 7. Maṇṇittalai, 8. Tiruvaṭinilai, 9. Kaḷaiyōṭai, 10. Āṉaikkōṭṭai, 11. Muḷḷi, 12. Kantarōṭai, 13. Ariyālai East, 14. Tulukkankōṭṭai, 15. Vallipuram, 16. Nākarkōyil, 17. Tāḻaiyaṭi-Cempiyaṉpaṟṟu, 18. Vettilaikkēṇi.

Plate 163 : *Settlement pattern in Jaffna — phase II (c. 100 B.C. — c. 500 A.D.)*



Key : 1. Veṭiyaracaṉkōṭṭai, 2. Tikaḻi, 3. Nayiṉātīvu, 4. Vērappiṭṭi, 5. Cattirantai, 6. Vēlaṇai, 7. Cāṭṭi, 8. Allaippiṭṭi, 9. Maṇṇittalai, 10. Kautārimuṉai, 11. Tiruvaṭinilai, 12. Ticaimaḻuvai, 13. Kāṭṭuppulam, 14. Āṉaiviḻuntāṉ, 15. Kantarōṭai, 16. Kaḻaiyōṭai, 17. Muḷḷi, 18. Āṉaikkōṭṭai, 19. Maṇiyamtōṭṭam, 20. Ariyālai East, 21. Nallūr, 22. Irupālai, 23. Kōpāi, 24. Kalvaḷai, 25. Paṅkuṉippiṭṭi, 26. Vērakkāṭu, 27. Kaccāi, 28 A. Tulukkaṉkōṭṭai, 28. Vallipuram, 29. Valikaṇṭi, 30. Nākarkōyil, 31. Karumaṇalkumpi, 32. Tāḻaiyaṭi, 33. Vettilaikkēṇi, 34. Taṭṭāṉkōṭu, 35. Maṇṭalāi, 36. Kōyilvayal, 37. Nittiyaveṭṭai, 38. Kuyavaṉpiṭṭi, 39. Cālai.

Plate 164 : *Settlement pattern in Jaffna — phase III (c. 500 A.D. — c. 1300 A.D.)*

Chinese trans-oceanic trade never had its focus in Jaffna. Instead, the focus had shifted to Māntai in the Mannār district.

By this time, the interaction between technology and environment, favoured the dry zone of the main island. The resultant hydraulic developments, rendered Anuradhapura as the most powerful centre in the entire island. Probably this factor shifted the trade focus from Kantarōtai to Māntai as the Māntai port mainly catered to the needs of Anuradhapura.

The settlements in Jaffna in this phase were marked by poverty, compared to the innumerable rich settlements of the dry zone south. Jaffna probably came under the hegemony of Anuradhapura in this phase.

Phase IV

In terms of artifacts, the phase is marked by the overlapping of Thick Rim Red Ware and Grooved Rim Ware. Chronologically the phase started around 10th century A.D. and continued upto the advent of the Portuguese. Though this phase goes out of our scope, it is discussed here briefly for the sake of continuity.

Striking developments were noticed in this phase. Many of the old settements of phase III were abandoned. The central place Kantarōṭai itself was abandoned. New settlements arose and they were found widely distributed throughout the Peninsula. The kingdom of Jaffna and a new capital at Nallūr eventually emerged. The sites yielded a number of — sometimes hoards — 11-13th century Sri Lankan coins and the coins of the Kings of Jaffna. There was a spurt in the Arab-Chinese trade as evident from the Arab-Chinese artifacts of 11-13th century. All these developments were part of the bigger changes that took place in south India and Sri Lanka with the rise of the Cōḻa power and the collapse of Anuradhapura.

A definite written source that may help to locate the settlements of the later part of this phase is the Portuguese records in which a list of villages that paid tax could be found.[53]



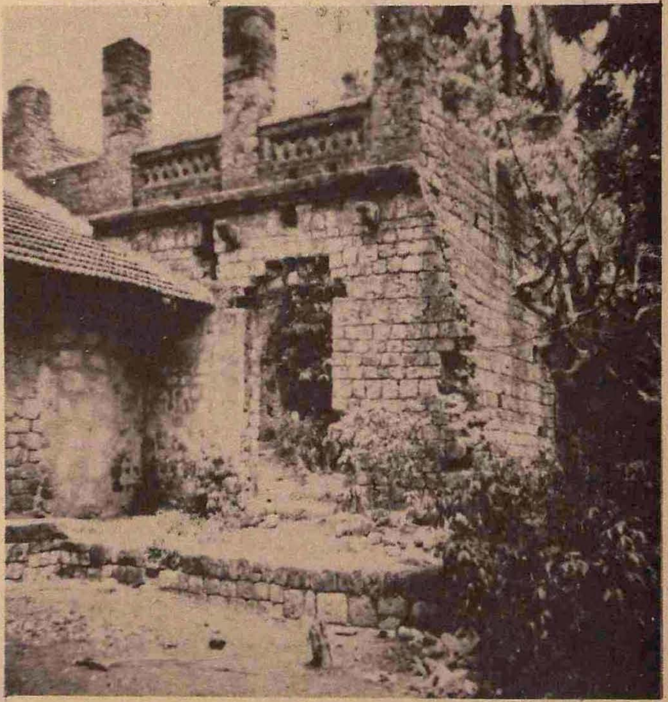


Plate 165 : Remains at Nallūr.

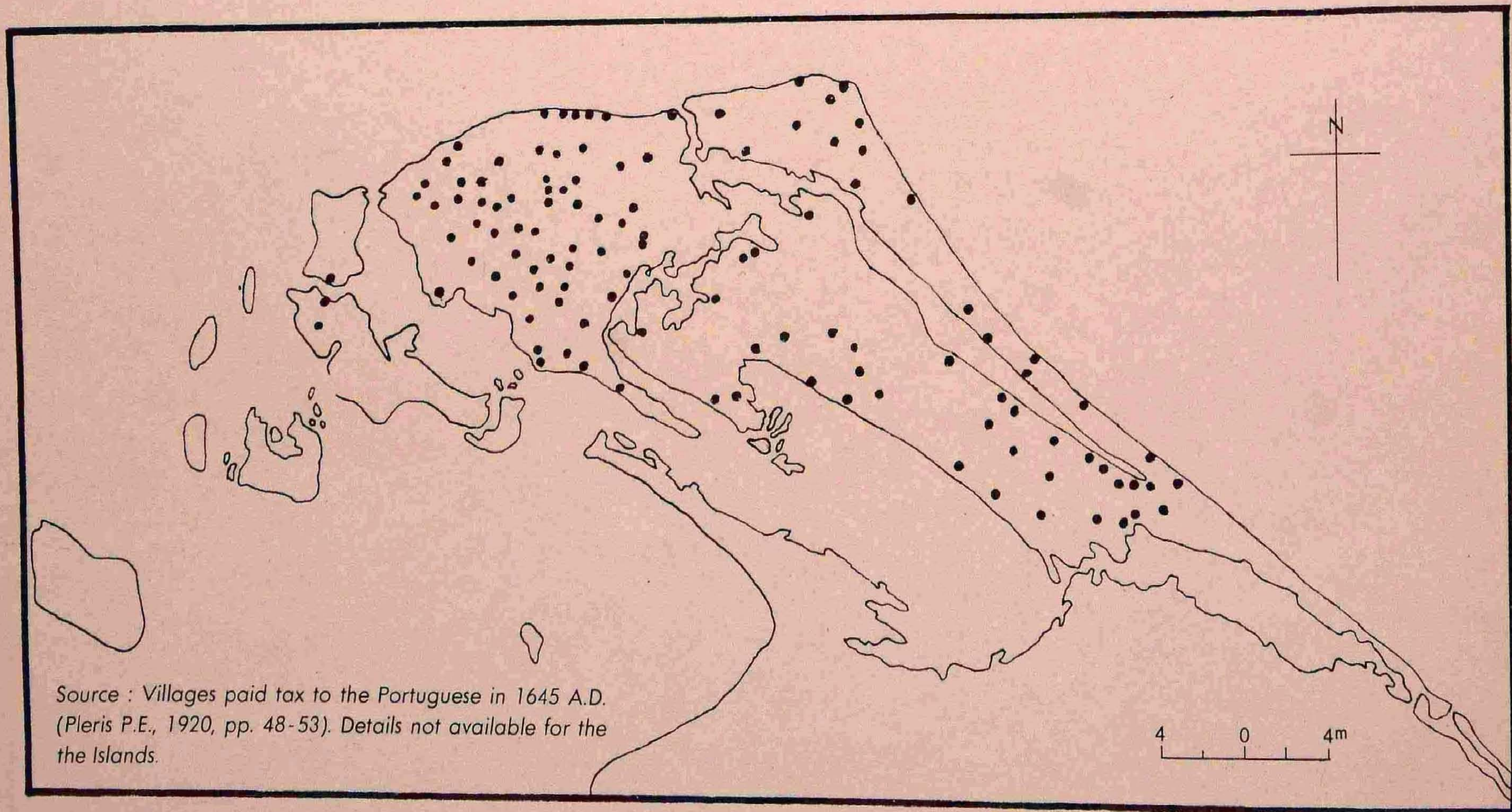


Plate 166 : *Settlement pattern in Jaffna — phase IV (c. 1300 A.D. — c. 1600 A.D.)*

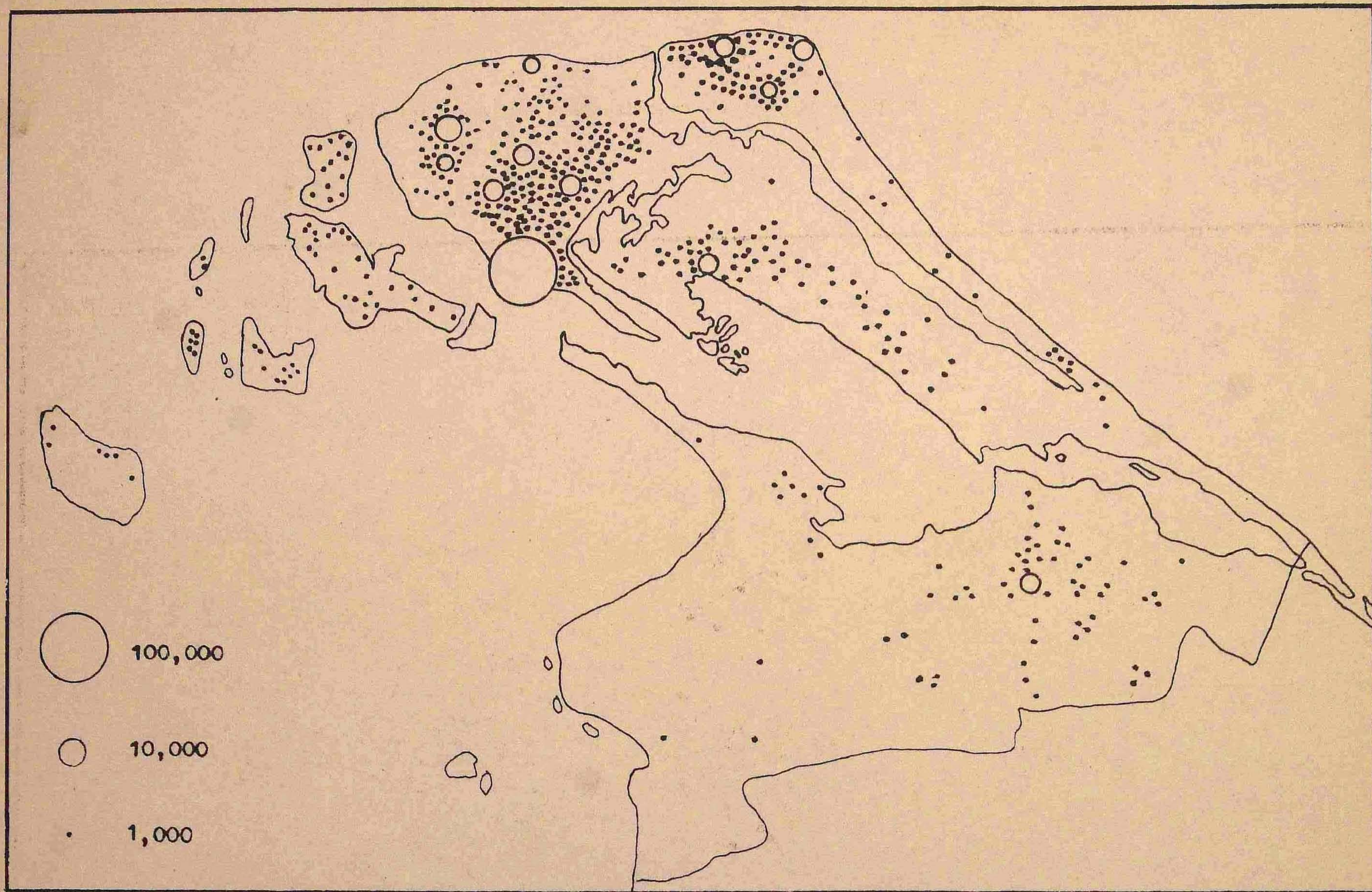


Plate 167 : *Population map of Jaffna, 1981.*

CONCLUSIONS

Plate 168 : *A Megalithic burial urn at Āṉaikkōṭṭai.*



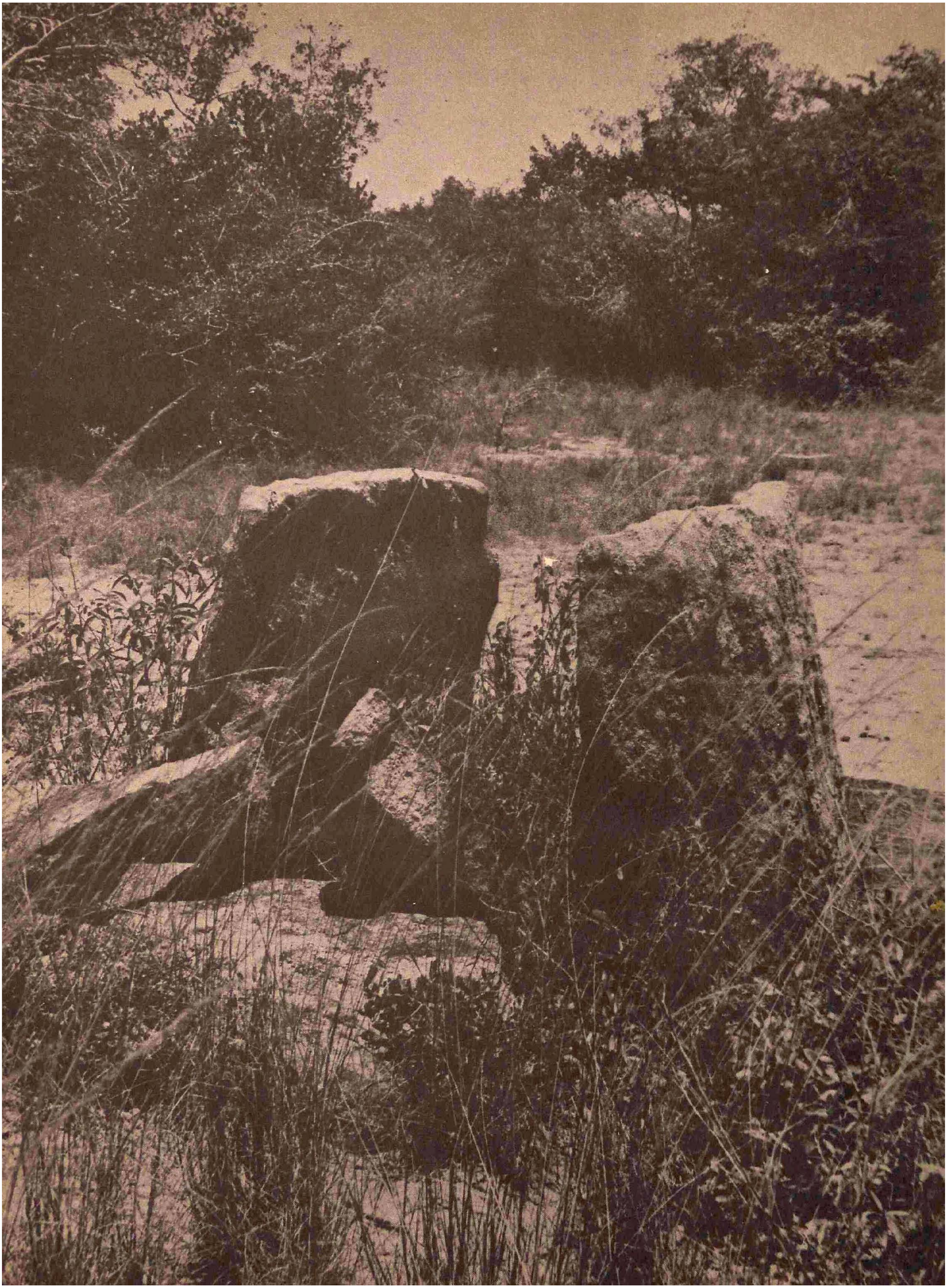


Plate 169 *: A disturbed Megalithic dolmen at Katiraiveḷi in the Eastern Province of Sri Lanka. Until recent times Katiraiveḷi was known as a village of the Veddas — the aborigines of Sri Lanka. Astonishingly, this burial site is still known by this villagers as 'Kuraṅkuppaṭai Vempu', without being conscious of its meaning. Kurakkuppaṭai is the ancient Tamil name for Megalithic dolmens. 'Kurakku' — death; 'Paṭai' — monument; 'Kurakkuppaṭai' — monument for the dead. 'Vempu' is a term for barren land, especially used in the Eastern Province.*

Who were the early inhabitants of Jaffna? When did they occupy this land? How did they interact with their environment? What was the historical process that finally culminated in the emergence of a kingdom and established a distinct cultural pattern in the Peninsula? These are some of the original questions that impelled us to carry out this research. The archaeological field work conducted between 1980 and 1983, now makes it possible to attempt some answers to these questions.

According to confirmed archaeological knowledge, the first inhabitants of the Island of Sri Lanka were the Mesolithic people who practised a microlithic stone-tool industry. This phase of Sri Lankan prehistory is usually looked upon in association with the microlithic *teri* culture of the Tirunelvēli region of Tamil Nadu.[1] Commendable work has been done recently by S.U. Deraniyagala in unveiling the microlithic phase of Sri Lanka and thanks to his efforts, startling absolute dates are available now for some of those microlithic sites.

C_{14} dates, obtained from different laboratories, for the cave sites of southwestern Sri Lanka go back to 28,000 B.C. This was cross-checked by thermoluminiscence dating for the dune (*tēri*) deposits covering the microlithic tool-bearing gravel in the northern plains. Again, the same date was arrived at. It was told that even the Tamil Nadu Tirunelvēli *tēri* dunes, when dated by this method, go back anterior to the Sri Lankan *tēris* (32,000 B.C.). The hypothesis is that the first inhabitants could have migrated to Sri Lanka through a land-bridge that existed between northwestern Sri Lanka and southeastern Tamil Nadu at that time. The calculations point out that this land-bridge was in existence till 7000 B.C.[2]

These discoveries if confirmed, may revolutionize the whole perspective on Mesolithic and Upper Palaeolithic sequence in South Asia, where the distinction between them and the chronology are still vague. A question now arises whether this earliest phase of Sri Lankan prehistory can be merely called Mesolithic in the wake of the current discoveries. Hence, in the Sri Lankan context, we prefer the term microlithic, as it could be a comprehensive one to denote the whole prehistoric cultural sequence in Sri Lanka. We wish Deraniyagala will continue his efforts to unveil the shadowed areas of this phase. Simultaneously fresh studies in Tirunelvēli and southern Kerala are warranted to understand and correlate the Sri lankan sequence.

The microlithic sites in Sri Lanka are located throughout the Island, barring the Jaffna peninsula. In the hilly regions, they were found in the cave and rock-shelter sites and in the plains they were found in the *teri* deposits. A field work programme we did along with the Department of Archaeology in 1982, revealed that the distribution of microlithic sites extend to as north as Punakari, that means to the very doors of the Jaffna peninsula.[3] On another occasion, a few microlithic tools were collected by us at Mannittalai, a sand-bar projection from Pūnakari, which is at a visible distance from the Jaffna city.[4]

But, what intrigues one is that not even a single microlithic site has so far been found in the Jaffna peninsula, despite a rich microlithic culture in the rest of the Island. It seems, that the first wave of migrators from the peninsular India — the microlithic people — did not choose Jaffna as a habitat. This could be due to the non-availability of microlithic tool material in the Peninsula. Presumably, it was

those of the second wave of migration from south India — the Megalithic folk — who occupied first Jaffna in the protohistoric times.

O O O

The controversies over the origins of Megalithic culture in south India are yet to be solved satisfactorily. Several theories have been putforth ranging between proto-dravidian and Mediterranean origins.[5] There is also a view that this culture denotes the first wave of Aryan inspiration or migration to south India.[6] Let us keep away from discussing these controversies in this research. What is obvious is that the Megalithic culture was a common basis for the various social formations in south India and that it was this culture which spelt out clearly whatever the salient features we now call proto-dravidian.

The Megalithic culture, in the South Asian context, is essentially a south Indian phenomenon, identified by the various types of burial monuments found to be distributed throughout south India. The earliest evidence of this phase had come from Hallūr, Karnāṭakā, dated to c. 1000 B.C.[7] and the trend survived to the early centuries of the Christian era in many pockets of south India. Besides the burial monuments which rendered the term Megalithic, the culture is further denoted by certain homogeneous features like the introduction of iron technology, tank-irrigated agriculture, developed settlements and a special pottery technique which produced the Black and Red Wares. The urbanization in south India, the rise of the earliest kingdoms and chieftaincies in this region and the refinement of the language to the stage of producing the Caṅkam Tamil literature were actually the culmination of the Megalithic culture.[8]

It has now been established by archaeological sources, that even the dawn of History in Sri Lanka was indebted to this south Indian sequence.[9] In Sri Lanka, it was the Megalithic culture that marked the end of prehistoric microlithic phase and the beginning of protohistory in c. 6th century B.C., if not earlier. A number of Megalithic sites has been so far found distributed throughout Sri Lanka. The classic example is the Megalithic urn burial site at Pomparippu, Puttaḷam[10] which is parallel to Āticcanallūr in the Tirunelvēli region of Tamil Nadu, on the other side of the Gulf of Maṉṉār. At Anuradhapura, the sequence points out the presence of a microlithic phase at the bottom and after that, separated by a sterile layer, the Megalithic culture was at the genesis of the urbanization of that city.[11] It was a leap from microlithic to Megalithic without passing through a Neolithic phase. This Sri Lankan sequence is identical to the sequence of extreme south India. Again, parallel to south India, the Megalithic phase led Sri Lanka into the dawn of history with the appearance of Brahmi inscriptions around 3rd century B.C.

The characters of these Brahmi inscriptions have close affinity with the Tamil Brahmi or Tamiḻi inscriptions of extreme peninsular India and differ significantly from the Asokan Brahmi. Besides, the clan names which appear in these earliest written records of Sri Lanka are nothing but the clan names one finds in the Caṅkam literature,[12] suggesting a common ethnicity between Sri Lanka and extreme peninsular India.

O O O

These archaeological facts are contrary to the traditional view about an Aryan migration, presented in the Buddhist chronicles of Sri Lanka, which were compiled nearly one thousand years later than the protohistoric events mentioned in them. Though one cannot rule out the role of north Indian influences in the form of cultural inspirations, there are so far no archaeological evidences in support of the so-called mass aryan migration to Sri Lanka. Hence, the current understanding is that the Megalithic culture of Sri Lanka was not merely an overflow of south Indian culture as conceived previously by Sri Lankan scholars. But, it was a full-fledged and integral part of the cultural heritage of Sri Lanka, common to both Sinhalese and Tamils.

While not denying the role of the Megalithic culture in the transition from prehistory to protohistory in Sri Lanka, we also find that many pockets in Sri Lanka were unaffected by the Megalithic culture and remained microlithic. It seems, it was only at later stages such pockets came into contact with the cultural waves from the urbanized central places in Sri Lanka and leaped directly into the Historic period, without passing through the Megalithic phase.[13]

O O O

In the case of the Jaffna peninsula, the Pennsylvania University Museum team which carried out excavations at Kantarōṭai in 1970, reported for the first time

the probabilities of a Megalithic phase there,[14] though no burials were unearthed in that expedition.

Four more sites, found with pottery belonging to this early phase were brought to light during the present survey. Two of them, Āṉaikkōṭṭai and Kaḷapūmi, were found in the rescue excavations as Megalithic burial sites, which imply that there were permanent Megalithic settlements in the Peninsula.

Hence, now it has become a fact beyond doubt that the earliest inhabitants so far known in Jaffna were the Megalithic people and as there was no microlithic phase to overlap, we assume that the dawn of human habitation in Jaffna was directly based on the Megalithic culture.

This research has been conducted without some of the modern facilities available in the field of archaeology. This has affected the establishment of the chronology. Yet, the stratigraphy of the rescue pits, pottery typology, and the palaeography of the Āṉaikkōṭṭai seal, have helped us to tentatively assign the burial sites of Jaffna to three centuries before the Christian era. Probably, Kārainagar could be older than Āṉaikkōṭṭai as hinted by its pottery and by the presence of a microlithic flake as a burial offering. Without mentioning absolute dates, Vimala Begley assigned the earliest date of Kantarōṭai to 4th century B.C.[15] Fortunately, now there are absolute dates available for the Megalithic phase of Jaffna which almost confirm our views or even push back the date. The C_{14} dates recently received for the Pennsylvania University excavation samples from Kantarōṭai, range around 500 B.C. The dates for two of the samples out of fifteen, even go back to the second millennium B.C., but, we are sceptical about them.[16]

Technically, history begins with written evidence, and throughout South Asia it was the 3rd century B.C. that marked the transition from the protohistoric to the historic phase, with the advent of Brahmi inscriptions. In Jaffna, Brahmi assignable to 3rd century B.C. was found both at Kantarōṭai and Āṉaikkōṭṭai.[17] At Āṉaikkōṭṭai, the Brahmi script occurs along with what could be assumed to be a previous system of writing.[18] It is now difficult for us to say whether there was a pre-alphabetic phase in Jaffna which could be assigned as protohistoric, but with great caution we suggest that a narrow period of two centuries can be termed as protohistoric. This is in view of the lower C_{14} dates for the Megalithic phase of Kantarōṭai which go beyond 3rd century B.C. It is reasonable to conclude that the Megalithic culture arrived in Jaffna in the protohistoric times, caused the emergence of rudimentary settlements and continued into the early historic times marked by urbanization. Hence, the cultural term Megalithic in the context of Jaffna include both the protohistoric and early historic periods. For convenience we may call the pre 3rd century B.C. phase as early Megalithic and the post 3rd century B.C. phase as late Megalithic.

What made the Megalithic people to prefer the Peninsula as a habitat? The answer seems to lie in their multi-faceted subsistence pattern. Settlement and subsistence activity is an interaction between the available technology and the prevailing environment. When it was the hunting economy and stone-tool technology, forest and hilly regions were preferred because of the game and availability of tool raw-material. On the other hand, arid and scrubby Jaffna region with its lagoons and flood outlets was a land of preference for the technology and subsistence patterns of the Megalithic culture.

The scrub, easy to clear by the incipient iron technology; freshwater at low depth; farming in the rain-flooded silt stretches; pasturing in the *taravai* grasslands; natural ponds in the limestone bed-rocks; the potentialities of the lagoon — all these could have been ideal features that were conducive for the rudimentary Megalithic settlements.

As said before, the earliest absolute date so far obtained for the Megalithic culture in south India is c. 1000 B.C.[19] The beginning of Megalithic culture in Jaffna, with the help of the Kantarōṭai C_{14} dates, can be assigned to c. 500 B.C. Thus, the cultural sequence of Jaffna, reasonably fits into the diffusion pattern, as a component of the Megalithic milieu of south India.

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Yet, certain questions remain unanswered. Firstly, we do not know exactly from which part of south India the Megalithic culture of Jaffna did arrive. It needs further investigation. An expedition in the coastal tract between Kōṭikkarai and Nākappaṭṭiṉam in the Coromandel coast may provide some clues as this tract is the nearest coastline off Jaffna. There is also a probability that this south Indian culture could have been routed through the northwestern part of Sri Lanka to Jaffna.

Secondly, the question is, whether the *Nākas* who are traditionally ascribed as the aboriginal inhabitants of Jaffna,[20] were the Megalithic folk. Whether the *Nākas* migrated to Jaffna as the bearers of Megalithic culture or whether they are aborigines to whom the Megalithic culture arrived as an inspiration is the question. All that can be said now with the available evidences is that the earliest inhabitants of Jaffna were culturally affiliated to south India; communicated in a language that may be called proto-dravidian as testified by the Āṉaikkōṭṭai seal (see appendix II); and were practising a religious ideology similar to that of the Megalithic south India. In the light of these evidences, the origins of the Tamil dialect and the folk religion in Jaffna can be traced back to the protohistoric times.[21]

A proper study of the Megalithic culture of Jaffna, put into the frame of south India and Sri Lanka, will be certainly rewarding. This will not only reveal the early past of Jaffna, but, in a wider south Asian perspective, will also help to understand the dynamics of the Megalithic culture itself that has manifested into various social formations in this region.

In south India, a common Megalithic cultural stratum later caused the cultural formations of Tamil, Kannada, Telugu, Malayalam, Tulu etc. Besides, there were a number of lesser formations. In the Caṅkam literature itself one could come across a five-fold social stratification based on the man-environment relationship in the ancient Tamil country. It seems, the development of Sinhala and Tamil formations in the Island of Sri Lanka also belong to this milieu. In the later centuries, the Sinhala-Buddhist formation developed into a major formation on par with the other major formations of south India, where as the Jaffna Tamil formation remained as a lessor formation.

In such a model, the Jaffna Tamil identity need not be perceived as one that belongs to the Tamil identity in south India. It could be a parallel identity. We feel that comprehensive studies in the cultural anthropology and linguistics of Jaffna will certainly substantiate this view.

O O O

The next phase of the history of Jaffna is marked by the emergence of a principality, the memories of which are found preserved very vaguely in the later chronicles of Jaffna.[22] The number of settlements increased during this phase, while the previous Megalithic settlements evolved and continued. Nearly ten sites were identified as belonging to this phase. Significantly, many of these fresh settlements arose without an agricultural hinterland, indicating that now the settlements of the Peninsula were no longer self-sustaining units, with a multi-faceted subsistence pattern, but had become specialised and interdependent in their activities.

It was possible that the surplus agricultural and pastoral products of the previous settlements were large enough to support the fresh ones. But, the evidences strongly point out that it was the opening up of the trade routes, both South Asian and trans-oceanic, just before the dawn of the Christian era that was mainly responsible for the new developments in the Peninsula.

The dawn of the Christian era witnessed the emergence of trans-oceanic maritime trade. The Roman empire, with knowledge about monsoons, had a flourishing maritime trade with south India. Further, it was the time when the South Asian sea-farers went up to Southeast Asia and either inspired or caused the establishment of 'Indianised States'. Inevitably, by its geographical location, Jaffna was linked with this maritime phenomenon of east-west contact.

The early sea trade routes, as far as possible, were coastal passages, to avoid risks. To travel from the western coast to the eastern coast of India, the Roman and Indian vessels traversed through the Gulf of Maṉṉār and the Palk Strait instead of going around Sri Lanka. An added attraction to this route was the pearl and conch shell diving activities in this waters. They crossed the Adams Bridge reef through the channels at Māntai and Pāmpan. The evidences from Arikkamēṭu clearly point out direct Roman contact with the Coromandel coast.[23] In such a passage, Jaffna cannot be by-passed. (See plate 147).

Besides the trans-oceanic routes, the other trade routes from Jaffna, the land and ferry routes discussed earlier, (see plate 154) connected the Peninsula with the main Island of Sri Lanka both along the eastern and western coasts. At their northern termini, the routes ended with the entrepots of the Peninsula, thus linking the subcontinent with Sri Lanka, while the whole Jaffna peninsula and its adjoining islands served as stepping stones. Quite interestingly, almost all the

fresh settlements of this phase were located either along these trade routes or at the entrepots facing the deep-sea trade routes, confirming our views on the conditions that were responsible for the new developments in the Peninsula.

The factors discussed above kindled the process of urbanization in the Peninsula. As a result, Kantarōṭai emerged from its Megalithic basis, as an urbanized central place and it was possible that economically, culturally and politically, this place controlled the rest of the settlements in the Peninsula.

The available evidences place Kantarōṭai as the widest and the richest early settlement, with the largest number of early structural remains, situated in the most potential agricultural strip of the Peninsula. Chronologically, we assign the urbanization of Kantarōtai, to the beginnings of the Roman trade if not earlier, that is, to circa first century B.C.[24]

The urbanization of Kantarōṭai was parallel to Kāvērippaṭṭiṉam and Arikkamēṭu in the Coromandel coast, Koṟkai in the Gulf of Maṉṉār and was parallel to Anuradhapura and Mahāgama in the south of Sri Lanka.

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Both the Tamil literature and the Pali chronicles of the early centuries of the Christian era testify the regional character of Jaffna, which was known as Nākanāṭu. *Cilappatikaram,* while describing Pūmpukār (Kāvērippaṭṭiṉam), mentions its connections with the city of Nākanāṭu.[25] *Maṇimēkalai,* mentions Jaffna as Nākanātu and narrates its matrimonial relations with a Cōḻa prince.[26] It even mentions the name of the ruler of Nākanāṭu as *Vaḷaivaṇan.* (Probably one who owned a fort at Jaffna, as the name indicates. See Kalvaḷai site report for the meaning of *Vaḷai*). The Pali chronicles of Sri Lanka call Jaffna as Nāgadīpa. One of the protohistoric episodes recollected in them is a quarrel between two *Nāka* rulers of Nākadīpa. The Prakrit-Tamil Vallipuram gold plate that can be dated to c. 5th century A.D., names Jaffna as Nākadīva (*Nāka tīvu*) and notes its regional ruler who had constructed a Vihara.[27] Interestingly, the historiographical works of Jaffna that arose in the times of the kingdom of Jaffna also recollect the existence of a political authority in the Peninsula earlier than that at Nallūr.[28] These Jaffna chronicles and traditions invariably speak of an early dynasty that ruled from the city of Katiramalai before the arrival of the imperial Cōḻas.[28] Katiramalai is at present a place-name near Kantarōṭai.

These evidences when synthesised, impress us to perceive an ancient city-state at Jaffna during this phase, the dawn of the Christian era being its heyday. Such a model was possible in Jaffna during this phase when monarchy was yet to become imperial in this part of South Asia. One can make similar inferences from the existence of several chieftaincies parallel to the known three monarchies in the ancient Tamil country. In Sri Lanka too, the Brahmi inscriptions reveal the existence of various ruling dynasties in different parts of Sri Lanka before the development of Anuradhapura hegemony. The available evidences place Jaffna or Nākanāṭu as a regional identity in the above said pattern.

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Another aspect of this phase was the overlapping of Buddhism with the Megalithic beliefs. This is testified by the presence of a number of Buddhist remains found at Kantarōṭai and in other early archaeological sites in Jaffna. Most of them originated in the early centuries of the Christian era as they are found associated with the Historic Black and Red Ware. The others, found with only TRRW are the later ones, belonging to the latter half of the first millennium A.D.

During the early centuries of the Christian era, Buddhism was a fairly popular ideology in Tamil Nadu too. Infact it was a common ideological inspiration to various social formations in South Asia and elsewhere.

The Buddhist remains of Jaffna are unique in their concept and execution. They are highly localised and constructed entirely with the locally available material like coral and limestone. At Kantarōṭai they are found in a cluster at a particular spot. They seem to be burial monuments of monks, a buddhicised version of Megalithism. Such a concept in architecture and its execution in coral and limestone significantly differentiate the Jaffna monuments from those in the rest of the Island. Hence, we prefer to call this architectural expression as one that belonged to Jaffna Buddhism. The monuments explain, how at that time, the socio-economic and cultural conditions in Jaffna were able to adopt the Buddhist cult and were able to articulate it in their own way. The limestone

and coral architecture tradition of Jaffna in fact started with the Buddhist monuments and flourished for nearly two millennia till the advent of concrete. Buddhism was an integral part of the cultural heritage of Jaffna.

What was the relationship between Jaffna and the rest of the Island in this phase is a question to be pursued. The developments that were taking place south of Jaffna during this time were making Anuradhapura a powerful territorial centre, and one should acknowledge its inspirational influences on the affairs of the Peninsula. At the same time as we said earlier, Jaffna acted as a conduit for the fresh trends arriving from the subcontinent. According to tradition, even the Buddhist ambassadors of Asoka landed in the Peninsula and in a similar manner, the Peninsula could have acted as a channel of influence for the later inspirations of culture. However, the personality of Jaffna, with its distinctive dimensions had already taken shape and there is no substantial evidence that the Peninsula was under the complete hegemony of Anuradhapura which was yet to emerge in exerting its centripetal influence. It is evident from the fact that the Pali chronicles which narrate the history prior to 6th century A.D. are virtually silent about the Peninsula except for certain rare remarks and treat it almost an alien land, while the distant Ruhuna in the south gets a far better treatment in them.

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Coming to the third phase, what happened in Jaffna after the early centuries of the Christian era is obscured by the pathetic non-availability of evidences. The available evidences point to an abrupt economic deterioration for a few centuries until about the emergence of the kingdom of Jaffna. There was not even significant expansion of settlements.

The few TRRW sites in Jaffna that entirely belong to this phase were far inferior to such TRRW sites in the rest of Sri Lanka. There are clear indications of economic and cultural subordination of Jaffna in this phase. It is to be noted that even the Tamil-Saivaite influences, a result of the religious revival in the then Tamil south India, were mainly felt in the rest of the Island, but not in Jaffna. The Saiva saints Sampantar and Suntarar composed hymns on the temples at Tirukkētīsvaram (Māntai) and Tirukōnamalai (Trincomalee) but, no reference on Jaffna is found in the vast religious literature of the Tamil *Bhakti* movement.

Ironically, in the context of south India and Sri Lanka, it was this latter half of the first millenium A.D. that witnessed the rise of powerful kingdoms, empires, dynasties and strong regional characteristics. It was the time when Kannada, Telugu and Sinhala became distinct languages with literary output (Tamil attained this status several centuries earlier). It was the time when the south Indian regional dynasties like the Pandyas, Pallavas, Chalukkyas and Rashtrakutas arose with imperialistic aspirations. It was the time when the Sinhala-Buddhist formation in Sri Lanka consolidated its regional identity and resisted to the political and cultural domination of south India. Was Jaffna in the face of these trends unable to articulate its identity? Was it absorbed into the centripetal forces that were working in Sri Lanka and in south India? If so, why? We put forth a few hypotheses.

As said earlier, certain environments were preferred by certain cultural trends at a given span of time. Throughout south India and Sri Lanka the tank-irrigated agriculture was brought in with the Megalithic culture. At its incipient stage, Jaffna could have been a land of choice habitat. But, when the culture evolved into a gigantic, hydraulic based agrarian economy, involving technological achievements in dam construction, reservoirs, deforestation etc. in the potential lands of dry-zone Sri Lanka and in south India, Jaffna became a poor competitor.

The other major economic base — the foreign trade — declined along with the decline of Roman trade in c. 5th century A.D. The subsequent trans-oceanic, Arab-Chinese trade was focussed at Mantai, a place 100 km. south of Jaffna. The South Asian and trans-oceanic trade at Mantai catered to the needs of Anuradhapura, which had by now become the territorial centre of the Island.

These trends continued to the beginnings of this millennium till the fall of Anuradhapura and Pollannaruwa around which the fourth phase of the history of Jaffna begins.

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By the beginning of this millennium, from a powerful basis of hydraulic agrarian developments, the Cōḻa empire emerged dominating the entire south India. This, and the question of gaining control over the trans-oceanic Arab-Chinese trade that passed through

the waters of south India, inevitably activated the maritime expeditions and expansion of the Cōḻa power.

The sequence of the maritime expeditions of Rāja Rāja I (985-1014 A.D.) and Rājēndra I (1014-1044 A.D.) clearly indicate their ambitions on trade monopoly. The Kerala coast and the lakshadvipa islands were conquered first, to control the trade routes of the Arabian Sea; then the Island of Sri Lanka, particularly Māntai to check the Palk Strait passage; later the eastern part of Sri Lanka and the Coromandel coast up to Bengal were brought under Cōḻa influence to monopolise the trade in the Bay of Bengal; and finally the Southeast Asian expedition to gain control over the Malacca Strait.

It is well known that the Cōḻa invasions which started in the 10th century A.D., disturbed and uprooted the whole political set-up of the Island by the beginning of the 11th century A.D., and ended the Anuradhapura hegemony. The Cōḻa activities were mainly concentrated in the eastern part of the Island with the establishment of the new capital Jananatapura at Polonnaruwa. Being under the military rule of a viceroy,[29] Sri Lanka faced its first colonial experience during the times of the Cōḻas. Though the direct Cōḻa rule in Sri Lanka ended in 1070 A.D., their influences on the Sri Lankan affairs lasted till the fall of the empire in 13th century A.D.

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Quite certainly, Jaffna also had undergone the transitions during and after the Cōḻa interregnum. All the sources — literary, epigraphical and archaeological — are in favour of this view. All the chronicles of Jaffna distinctively narrate the arrival of the Cōḻa princes, Mārutapuravalli, who married the King of Katiramalai.[30] Subsequently, Katiramalai vanishes from the literary records. Then we read about a rush of Veḷḷāḷa chieftains and clans from south India to populate Jaffna and Vaṉṉi.

So far, two inscriptions have been found in the Peninsula both belonging to the reign of Rājēndra I (1014-1044 A.D.). One narrates the imprisonment of the king of Sri Lanka and the other records a grant to a temple at Nallūr, which later became the capital of the Kingdom of Jaffna.[31]

Rapid changes in the culture during this period are indicated by the archaeological evidences assignable to this period and afterwards. Many of the early settlements along with their Buddhist structures were found abandoned and some of them were not found populated again. Syncretisation of the declining Buddhist faith with Tamil Saivaism and folk religion took place. This seems to be a reason for the popularity of Aiyaṉār worship in the Peninsula, as Buddha was syncretised with Aiyaṉār.[32] The Tamil Saivaism or the Saiva Siddhānta sect was adopted as the elite form of religious ideology by the Veḷḷāḷa dominated social structure in the Peninsula.

A new type of pottery, Grooved Rim Ware, now appears and overlaps the old ones everywhere in the Peninsula. Paccilaippaḷḷi became a hive of activities as indicated by the archaeological evidence, probably because of mass migrations to Vaṉṉi through the Paccilaippaḷḷi sand passes. By the 12th century A.D., there seems to be a fresh spurt in foreign and domestic trade in Jaffna. This is testified by the presence of Chinese ware of this period,[33] by the presence of a large number of 11-13th century coins; by the 12th century Tamil inscription of Parākramabāhu I, found at Nayiṉātīvu giving details about the foreign trade at Kayts;[34] and through the remarks of the Arab traveller Ibn Battuta on Jaffna in the 14th century A.D.

In the main Island, Pollannaruwa collapsed by the beginning of 13th century A.D. The hydraulic based agrarian pattern in the dry-zone Sri Lanka declined. There were mass migrations towards the spice growing wet-zone part of the Island. Since then, the capitals of the Sinhalese kings were found in the southwestern and central regions of the Island.

In south India, after the decline of the Cōḻas, there was no competent imperial power till the advent of the Vijayanagara empire. The second Pāṇdyaṉ empire, which had some active contacts with Māntai and the northern parts of the Island[35] was also weakened towards the end of 13th century A.D.

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All these trends in Sri Lanka and south India finally culminated in the formation of the Tamil-Saivaite kingdom of Jaffna around mid 13th century A.D. This became possible when there were no big powers in the south of Sri Lanka and in south India. The kingdom was partially agrarian and partially mercantile. (See appendix IV for the social structure that was prevalent in the times of the kingdom). Nallūr, which



was already emerging as a central place since Cōḻa times, became the capital of the Kingdom of Jaffna. The collapse of Kantarōṭai and the emergence of Nallūr could be envisaged by a comprehensive archaeological expedition at Nallūr. But, this has not been attempted so far.

To conclude, a proto-dravidian social formation that was present in Jaffna since protohistoric times was given a fresh impetus by the conditions during and after the Cōḻa interregnum to attain statehood. Sinhala and Tamil identities stemmed from a common cultural stratum in the distant past. In the subsequent times, the successive waves of Tamil elements coming into the Island were assimilated in the process of sinhalicisation. But, the impact of the Cōḻas left the northern and eastern parts of the Island to carve out a Tamil homeland. To this pattern, Jaffna became the core region that led the rest of the Tamil homeland in the times to come.

The Historical sequence of Jaffna, put into the frame of South Asian pattern, is a clear case of a distinct social formation which had its own man-environment relationship and subsistence patterns. Identity and assurance of subsistence pattern in their own land is a crisis faced by many social formations, especially by the lessor social formations in the changing face of post-colonial South Asia. The ethnic turmoil in Sri Lanka is essentially one that belongs to this pattern.

Plate 170 : *Nallūr, the capital of the Kingdom of Jaffna, emerged as a central place, replacing Kantarōṭai, in the beginnings of this millennium during the Cōḻa occupation. It survived as the capital till the final conquest of the Kingdom by the Portuguese in 1618 A.D. Nallūr, at present, is a residential suburb of Jaffna city. The entire site of Nallūr, around 5 km in circumference, is still virgin for archaeologists. Seen in the photograph is a monument found at Nallūr near Caṭṭanāthar (Sivan) temple.*

Appendix I

Study Area : Its Geographical Background

Location

The Jaffna peninsula, longitude 79° 54'-80° 2'E, latitude 9° 30'-9° 50'N, with an area of approximately 410 square miles, forms the northern most part of Sri Lanka. The Peninsula is about 40 miles long and 4 to 14 miles wide, bounded by the Palk Strait on its western and northern sides, by the Bay of Bengal on the east and by the Jaffna lagoon on the south. Several saline water lagoons occur in the Peninsula. The Peninsula is separated from the mainland by two external lagoons — one on the west called the Jaffna lagoon, and the other on the east called the Elephant Pass lagoon. The internal lagoons situated within the Peninsula are called Thondamanaru and Upparu lagoons. Very often all of them are collectively and, sometimes, individually referred to as the Jaffna lagoon. Only a narrow strip between the eastern part of the Lagoon connects the Peninsula with the main Island. The internal lagoons serve as drainage for the rain water surface run-off while a small stream, Valukkaiaru, which is over 8 miles long drains the south-western areas.

To the west of the Peninsula are small islands, viz., Karaitivu, Eluvaitivu, Analaitivu, Punkudutivu, Velanai, Mandaitivu and Neduntivu.

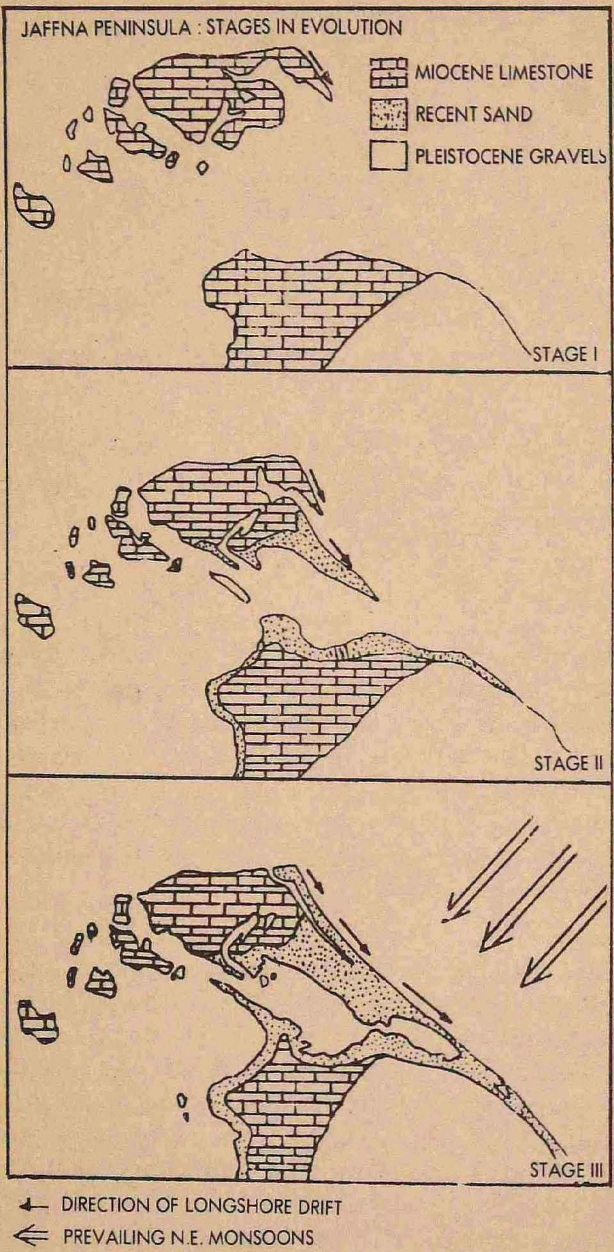
Jaffna itself is today the second largest town in Sri Lanka with a population of one lakh in 1971. Although it has lost the pre-eminance as a port and administrative centre which it had in the past, it still retains importance in domestic trade and is effectively the railhead. The Peninsula is also linked with Colombo, the capital of Sri Lanka, and with other parts by major road net work and air route and with the neighbouring islands by ferry service.

Geology

The Jaffna peninsula is underlain by the Jaffna limestone which is a grey yellow and white organogenic, porous limestone (reef limestone), very karastic in its upper near surface part. This limestone is typically a compact, hard partly crystalline rock which Cooray classifies as tertiary rocks of Miocene age.[1] The Miocene age, according to the geological time scale, is about 35 million years ago.

During this period, that part of the coast of Sri Lanka extending from what is now Puttalam to Jaffna peninsula and the corresponding section of the Indian coast were submerged and the gradual solution of the atmospheric carbondioxide in the sea resulted in the insoluble calcium carbonate This was extracted by the living organisms which on death contributed to the slow growth of sedimentary limestone rock that became pressed in to hardness by super incumberent layers. Differential movements deep in the body of the earth have been responsible for the lower and raised parts of the solid earth. Thus, the sedimentary formations of the Miocene limestone were projected above the sea level. The texture varies from somewhat cellular material, occasionally full of corals, to a massive rock in which gastropods are common and appears to represent accumulations associated with ancient coral growth. The rock usually weathers into a honeycombed

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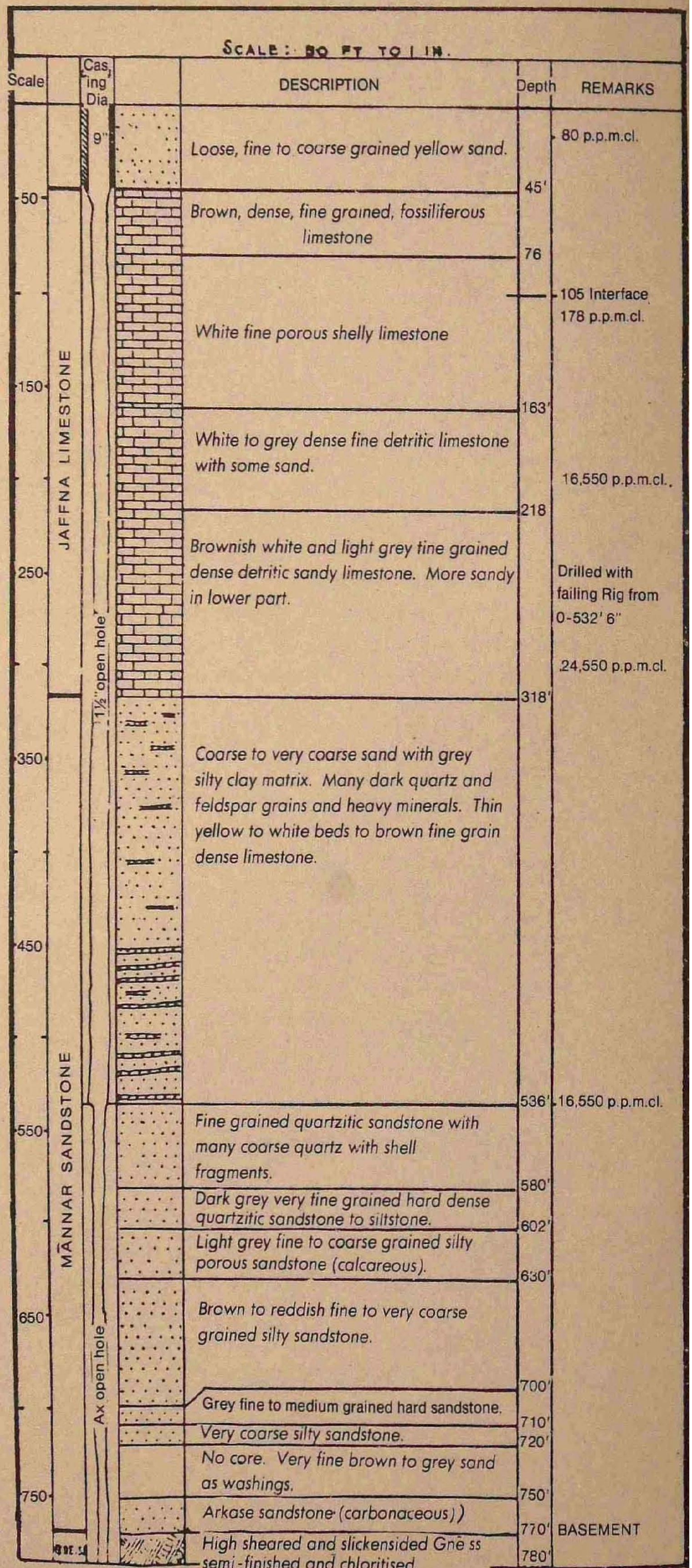


Plate 171 : *Geological formation of the Jaffna peninsula.*

Plate 172 : *Stratigraphy of Jaffna. Log of a drill-hole at Palai, Paccilaippalli. (right)*

mass'.[2] This limstone is slightly disturbed, buckling into gentle folds running in an east-northeasterly direction. Vertical movements appear to be more marked.

Areal photographs indicate a rectangular pattern with principal directions being NW-SW and NE-SW (Cooray 1967 and Srimanne and Vaidya 1958).

The limestone is well jointed. The thickness of the formation according to the drilling exploration of 1953 showed presence of limestone upto a depth of 270 feet. The more recent drill hole at Palai[3] to a depth of 780 feet showed that the 270 feet thick limestone was underlain by a thick sandstone formation above the pre-Cambrian basement The sandstone layer is encountered all along the sedimentary basin from Vannativil becomes 430 foot thick at Palai.

An examination of plate 173 shows that the sandy areas of the Peninsula are made up of four distinct tracts. All of them stretch in a north-west to south-west direction joining the limestone region in the northwest. A triangular portion of the limestone is itself buried under these sands. The sandy tract themselves are spits, evidently formed by longshore drift caused by the wave action and currents. During the period of northeast monsoon and the southwest monsoon these shores of north Sri Lanka are subjected to the southern and northern monsoon currents respectively. The northern current during the months from May to October (S.W. Monsoon period) carry along the eastern coast debris which become the raw material for the building up of the spits during the period of the northeast monsoon. The waves at this time.approach the coast obliquely and thereby help the longshore drifting in the eastern section.

Being separated from one another by an enclosed lagoon, they unite again to form a low sandy pass that bridges the Peninsula with the main land at Cundikkulam. The eastern spit is obviously the more recent formation. This view[4] is also supported by the fact that the sands are more sterile supporting very little vegetation cover and in many places are not yet fixed, giving rise to shifting dunes. Therefore, it would be correct to assume that the spit on the west was the first to be formed in the face of an emergent land. The other came to be formed subsequently as an offshore bar giving cause to a Lagoon and then as a spit. The two smaller spits still further west were creations of the currents and waves along the western and southern coast of the Peninsula. The smaller size of these spits is explained by the limited amount of debris material available in these shallow protected seas together with the curbed wave and current action one could visualise in such a situation. Somerville[5] lends support to this explanation for the evolution of the sandy tracts of the Jaffna peninsula.

Topography

In the strata of the limestone, gentle folds with minor anticlines and synclines are brought about by vertical movements. The highest point is at Keerimalai where a limestone and calcarious sandstone hill rises to a height of about 30 feet above the sea level. The coastline here is cliffy and many remnants as a result of erosion are found along it in the sea. Except a few locations with limestone outcrops or where the sand dunes infringe, the upper layer has a thin soil cover. The deposits of sand, wind-blown and water-borne lie in areas where the limestone surface sinks gradually below the sea level especially on the east, west and south.

Limestone Features

Caverns

The limestone in Jaffna is widespread and varied in occurence but essentially it consists of calcium carbonate which is soluble in the rain water containing carbondioxide. The rain water percolates through the karastic openings, joints and faults. Since the soluble parts are carried away, the remaining forms a cavern. The typical caverns in Jaffna peninsula are at Urikkadu, where the soil cover is washed off exposing the caverns.

These caverns have fragile covering material which decays in course of time. The floors of the caverns are covered with recent sediments which in most cases are the eroded particles of the relatively higher areas.

In the absence of surface rivers, solution by rain water is the chief weathering process and therefore, features such as solution chamber (eg., Puttur tidal well), sink holes are familiar.

Cliffs

The coast near Keerimalai is cliffy. So is the northern coast which is exposed to strong sea erosion and where limestone shelves down to some distance below the sea. The cliffs have a landward slope from an elevation of about 50 feet. Remnants of rock frag-

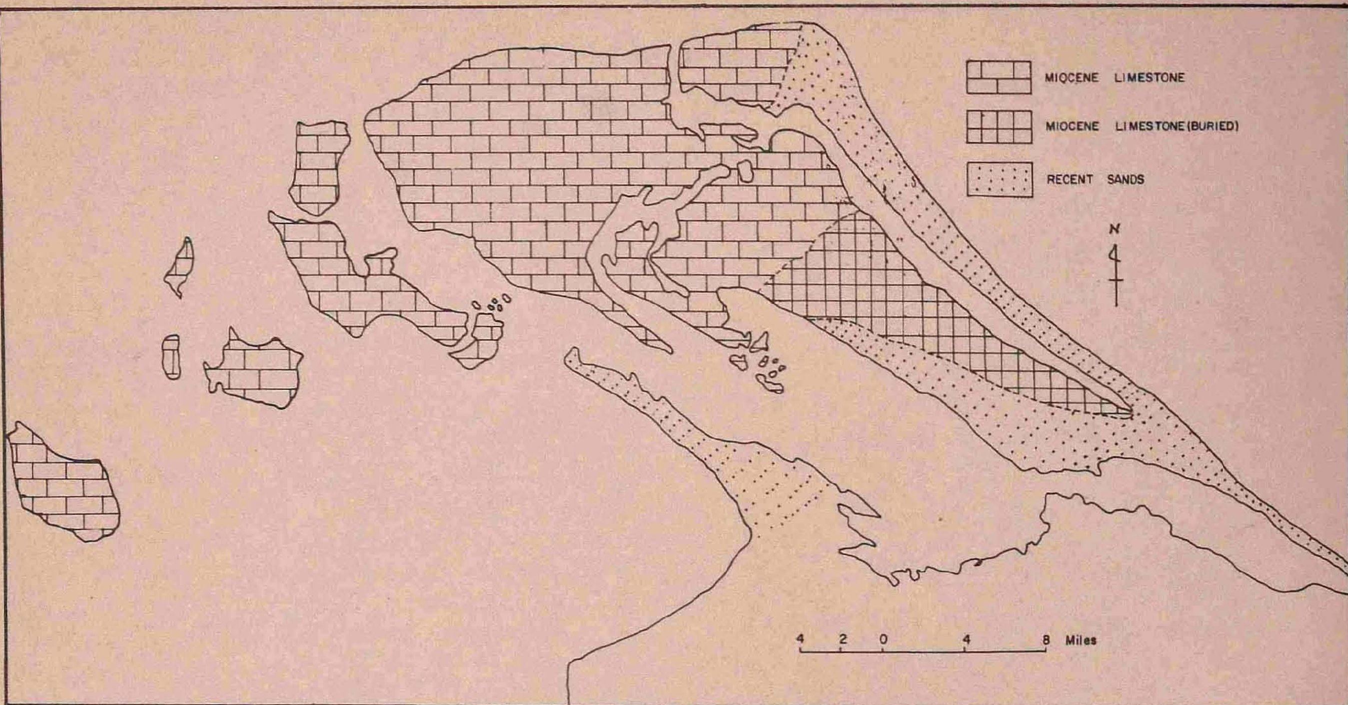
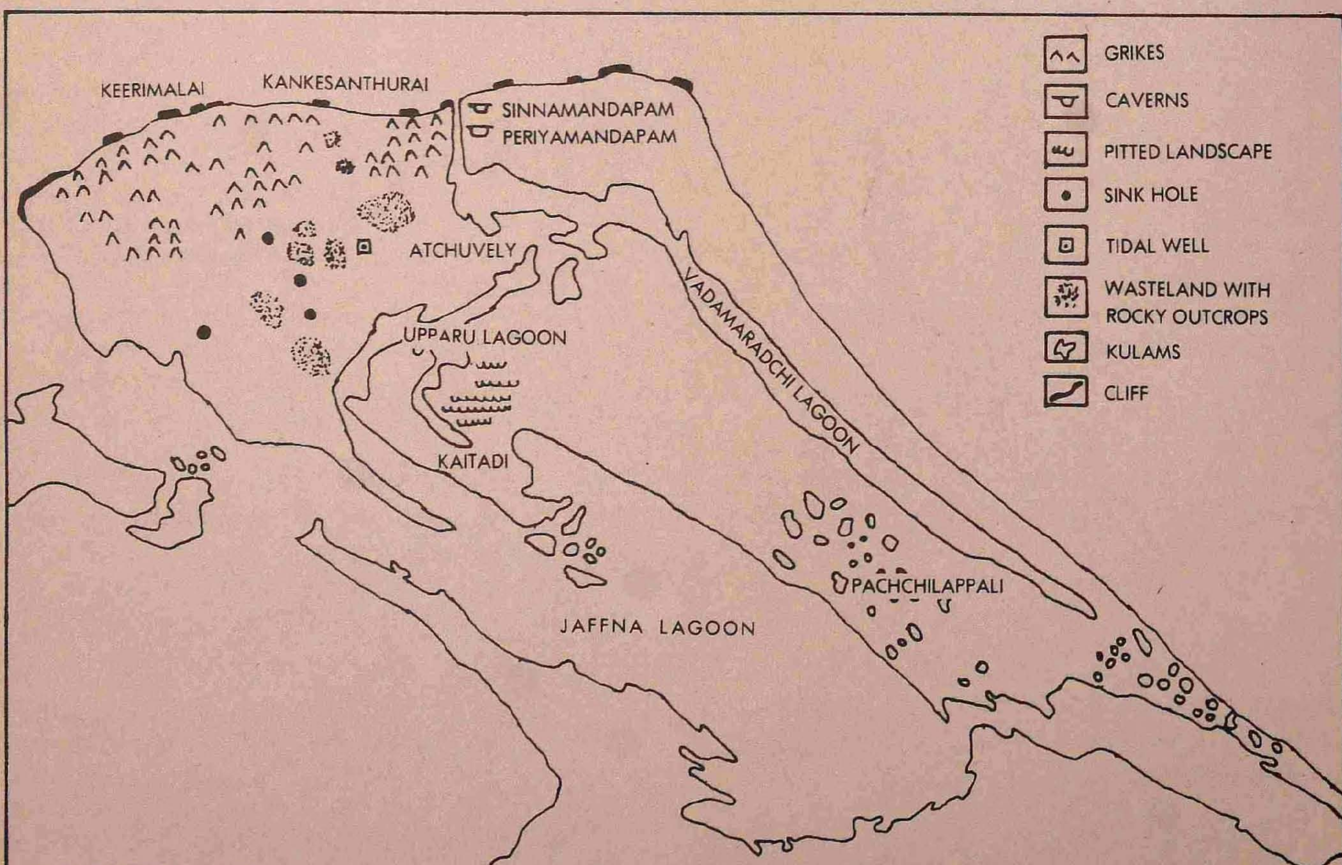


Plate 173 : *Geological map of the Jaffna peninsula.*

Plate 174 : *Limestone features in the Jaffna peninsula. (Below)*



ments are found in the sea, a little distance from the coast. The stones and pebbles along the coast are rounded in appearance. The coastline abounds in cave-like appearance.

Outcrops

The limestone as said earlier underlies the whole area of the Jaffna peninsula. But, it is seen as outcrops only in the north and north-western sections in abundance. The soil cover is washed off and the rain water falling on the bare rock forms sharp edges. There are small cavities where water stagnates and by exerting pressure helps the process of disintegration.

Economic Uses of Limestone

The limestone was extensively used for building purposes in ancient times. Even now, it is used to a limited extent in building wells, walls and temples. The mortar prepared from limestone was used for proximity to the subcontinent of India and is separated peninsula at Kankesanthurai using the raw material.

The soil cover which is derived from the parent limestone forms the agricultural tracts of Jaffna peninsula. They are by themselves not very fertile but, traditional and modern fertilizers have made them most productive.

The underground water storage in the limestone helps the peninsula to support a high population and supplies good water for irrigating garden crops.

Climate

The Jaffna peninsula is situated within ten degrees of latitude to the north of the equator. It is in close proximity to the subcontinent of India and is separated from it by the Palk Strait and Bay of Bengal. In size, the area is small since no place in it is more than 20-25 miles from the sea. The land nowhere rises more than 50 feet above mean sea level. These locational and physiographic conditions are acted upon by the 'equatorial atmospheric phenomena'[6], to create a set of weather conditions that have their individualities to make the region a climatic unit by itself (Tropical Monsoon Type).

Temperature

The latitudinal position of the region results in high temperatures due to the high angle of incidence of solar rays at all times of the year. However, there is an amelioration of temperature conditions due to the processes of convection, adiabatic cooling and resulting condensation; the latter accounts for the high percentage of humidity in the lower atmosphere. This, and the cumulus cloud covered skies, absorb and reflect the incoming solar radiation. The process of convection also leads to the development of the land-sea breezes which affect the temperature conditions on the sea board by making it more equable.

The average monthly temperature given for two stations in Table-I indicate that there are (a) two periods of maximum, coinciding with the periods of the overhead sun, one in April-May and the other in August-September. The April-May maximum is higher than the August-September maximum. In the case of Kankesanturai the first maximum occurs in April and the second maximum is not discernible; (b) the coolest part of the year is December or January and this coincides with the lowest sun and (c) the yearly averages in all cases fall around 83° F.

The highest maximum air temperature and the lowest minimum air temperature for the same two stations in 1976 are given in the following table.

TABLE I

THE AVERAGE MONTHLY TEMPERATURE FOR JAFFNA AND KANKESANTHURAI

	J	F	M	A	M	J	J	A	S	O	N	D	YEAR
Jaffna	83.4	85.6	88.6	91.2	88.8	86.7	86.2	86.1	86.3	85.4	83.2	83.0	86.2
Kankesanthurai	83.4	85.0	89.0	92.9	91.7	90.0	90.2	90.0	90.0	85.9	83.0	83.0	87.8

* Report of Colombo Observatory, Sri Lanka, 1967.

TABLE-II

Maximum and minimum air temperatures for Jaffna and Kankesanturai.

Jaffna	68.2 (January)	93.6 (April)
Kankesanturai	63.2 (February)	96.0 (April)

Pressure and Winds

Thermal differences give rise to pressure differences which in turn initiate air movements called winds. To understand the pressure controls on the climate of Sri Lanka, one has to consider the pressure systems over India. Following the march of the sun towards the tropic of Cancer beginning from the March equinox there develops over northwest India a low pressure system which is sufficiently intensified by May. This system begins to weaken as the sun starts its southward march towards the Tropic of Capricorn. By December, the low pressure system vanishes and gives rise to an equally intense high pressure system over north west India. These alternating high and low pressures take place over India year after year following the rhythmic movement of the sun. These systems are almost non existent during the March and September equinoxes.[7]

It has been generally believed that at the doldrum belt, the air from the northern and southern hemispheres meet. Recent works on the study of the convergence zone in equatorial regions have revealed that the equatorial air (equatorial westerlies) is a distinct air mass with its own characteristics. Jayamaha advances the theory[8] that the equatorial air stream presents two clear zones of demarcation : zone of northern hemisphere air and the zone of southern hemisphere air. These two boundaries appear in the day to day synoptic charts. 'One of these zones is found to remain between 05° S while the other oscillates between 25° N (July-August) and 10° S (January-February)'.[9]

The southern zone of convergence always keeps to the south of Sri Lanka. Hence the winds of Sri Lanka have to be explained in terms of the pressure systems that dominate India and the northern zone of convergence which stretch over Sri Lanka and to the north of it at different times of the year. Jayamaha has further shown that whenever the n.convergence zone is inactive, the weather of the Island will be controlled by thermal influences. The active periods are when true convergence is taking place within the zone at which time the convergence is associated with the clouding and precipitation.

By way of actual distribution, the pressure over Sri Lanka varies seasonally between 1014 and 1007 millibars. During March and April the pressure gradient is much lower amounting to less than 0.5 millibars. During the rest of the year the variation is between 1.0 and 2.0 millibars.

Table III[10] gives the percentage of wind directions for Jaffna in 1976. Observations were made to sixteen points, but are summarised here in terms of right points only.

From the table it can be deduced that the southwest monsoon begins to operate in May and continues to blow till October though one third of October experiences near calm. The southwest monsoon as meteorologists understand it today, consists of two

TABLE III

Percentage of Wind Direction for Jaffna

	Jan		Feb		Mar		Apr		May		June		July		Aug		Sep		Oct		Nov		Dec	
N	27	39	21	16	8	5	0	3	0	0	0	0	0	0	0	0	0	3	11	16	33	37	29	16
NE	47	55	55	80	21	48	8	23	0	6	0	0	0	0	0	0	0	0	8	27	37	47	50	61
E	8	3	18	4	35	40	3	10	3	3	0	0	0	0	0	0	0	0	6	5	7	2	10	15
SE	10	0	2	0	35	3	60	13	16	5	3	0	5	2	31	26	3	0	11	0	7	0	6	3
S	0	0	2	0	0	0	25	10	31	47	25	42	63	74	55	65	35	35	11	10	2	3	3	0
SW	0	0	2	0	0	0	3	35	48	39	70	58	32	24	8	10	60	62	35	34	3	5	0	0
W	0	0	0	0	0	0	0	3	2	0	2	0	0	0	0	0	2	0	3	2	2	2	0	3
NW	8	3	0	0	0	3	0	2	0	0	0	0	0	0	0	0	0	0	10	3	10	5	2	2
CALM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	3	3	0	0	0	0

phases, the shallow and the deep phase.[11] In its shallow phase it is the equatorial westerlies associated with the northern convergence zone. These winds appear in the early part of the monsoon period. The deeper phase which comes subsequently is believed to be caused by the upper air currents[12] that accentuate the equatorial westerlies.

Coming back to Table III we see that October is the month of variable winds with some persistence of winds from the south west. Thereafter the north west monsoon sets in and continues to blow. The months of March-April and October experience variable winds which are result of the doldrum weather conditions.

Rainfall

Owing to the absence of any high relief in the Jaffna peninsula the orographic control on rainfall is practically nil. Instability in the air is caused by convectional activity during the equinoctical periods (March-April; September-October). Cyclonic activity begins during the inter-monsoon periods and north convergence zonal activity, which operates effectively during the period of the retreating southwest monsoon[13] and the early northeast monsoon. Thus we see that the main meteorological phenomenon, the southwest monsoon, has no device for giving rains to the Jaffna region. The air masses that play a role in the climate of Sri Lanka are (1) The Equatorial Air, (2) The Indian Continental Air and (3) The North Pacific Trades Air. The South Pacific Air which never reaches Sri Lanka has an influence on the weather immediately to the south of Sri Lanka. The Siberian Air originating in North Central Asia exerts an indirect influence on the weather of the Island because it affects the weather of the Bay of Bengal. Of these, the Equatorial Air contributes the most moisture to Sri Lanka through the south west monsoon, while the Indian Continental Air and North East Trades Air, the former on account of its land origin, and both on account of their subsiding nature, carry limited amount of moisture).

The rainfall year for Jaffna peninsula can be divided into

1. The southwest monsoon period
2. The inter monsoon periods and
3. The northwest monsoon period

The southwest monsoon in its early and middle period blows as a dry wind over the Jaffna peninsula.

TABLE IV

The Mean (Ten Year) Annual and the North East Monsoonal Rainfall

S. No.	Station	Annual rainfall			N.E. Monsoonal Rainfall (Oct-Jan)		
		Mean (10 yr.)	During the year 1967	1968	Mean (10 yr.)	During the year 1967	1968
1.	Jaffna	47.07	53.20	27.75	38.05	39.50	22.10
2.	Jaffna Farm School	51.70	65.40	33.90	40.90	37.20	25.40
3.	Kondavil	—	—	36.20	—	28.10	28.10
4.	Ramanathan College	51.80	—	—	42.20	—	—
5.	Puttur	—	—	49.97	—	—	39.60
6.	Palai	47.40	57.60	35.68	43.90	28.00	24.60
7.	Mirusuvil	—	—	33.35	—	—	20.90
8.	Ampan	—	—	39.00	—	—	27.40
9.	Point Pedro	42.40	—	34.00	34.80	—	—
10.	Tholpuram	—	—	34.40	—	—	26.60
11.	Jaffna College	51.50	68.80	32.4	39.20	42.10	23.80
12.	Kankesanthurai	49.70	83.40	31.60	39.70	33.20	24.10
13.	Kayts	40.70	—	24.80	31.70	—	20.90
14.	Delft	37.10	—	—	29.50	—	—

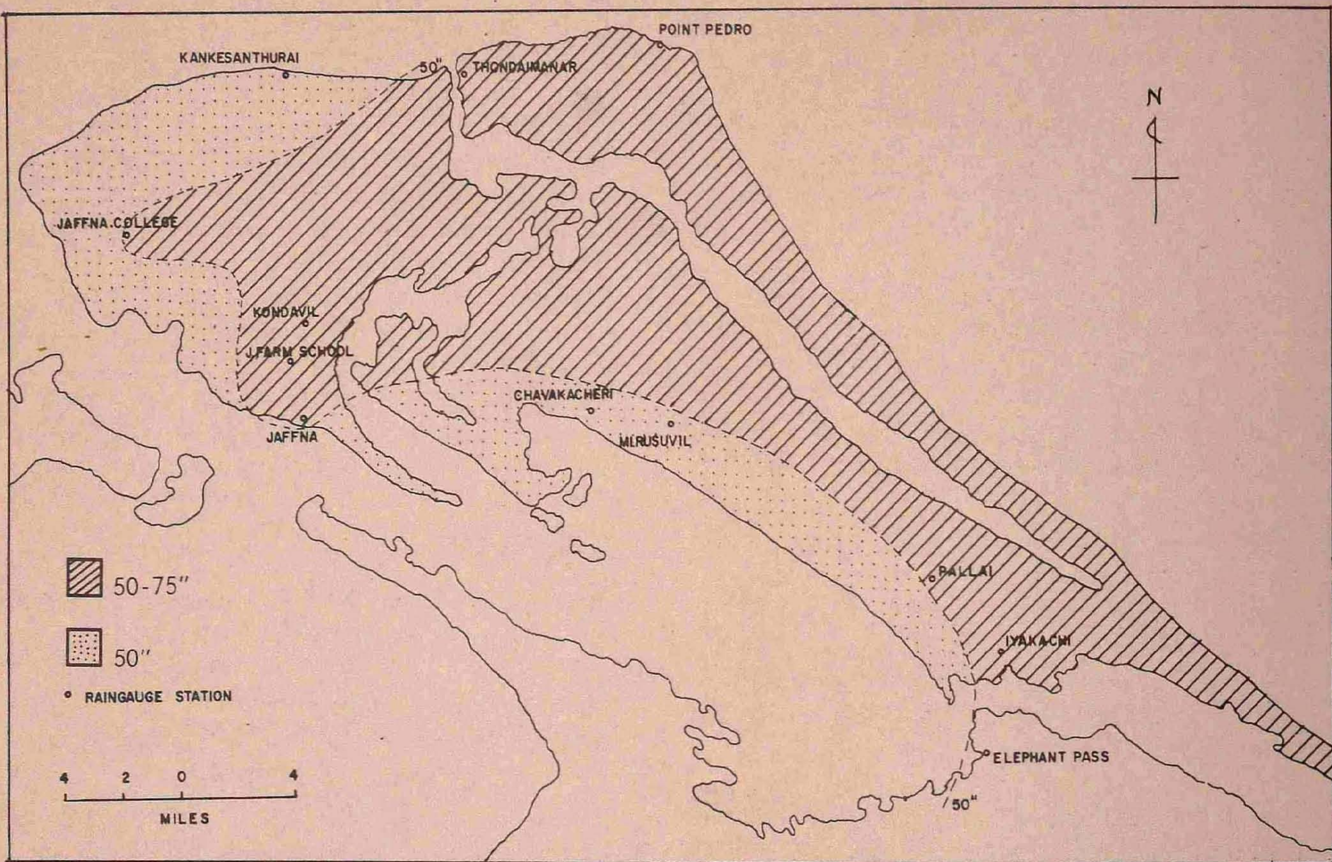
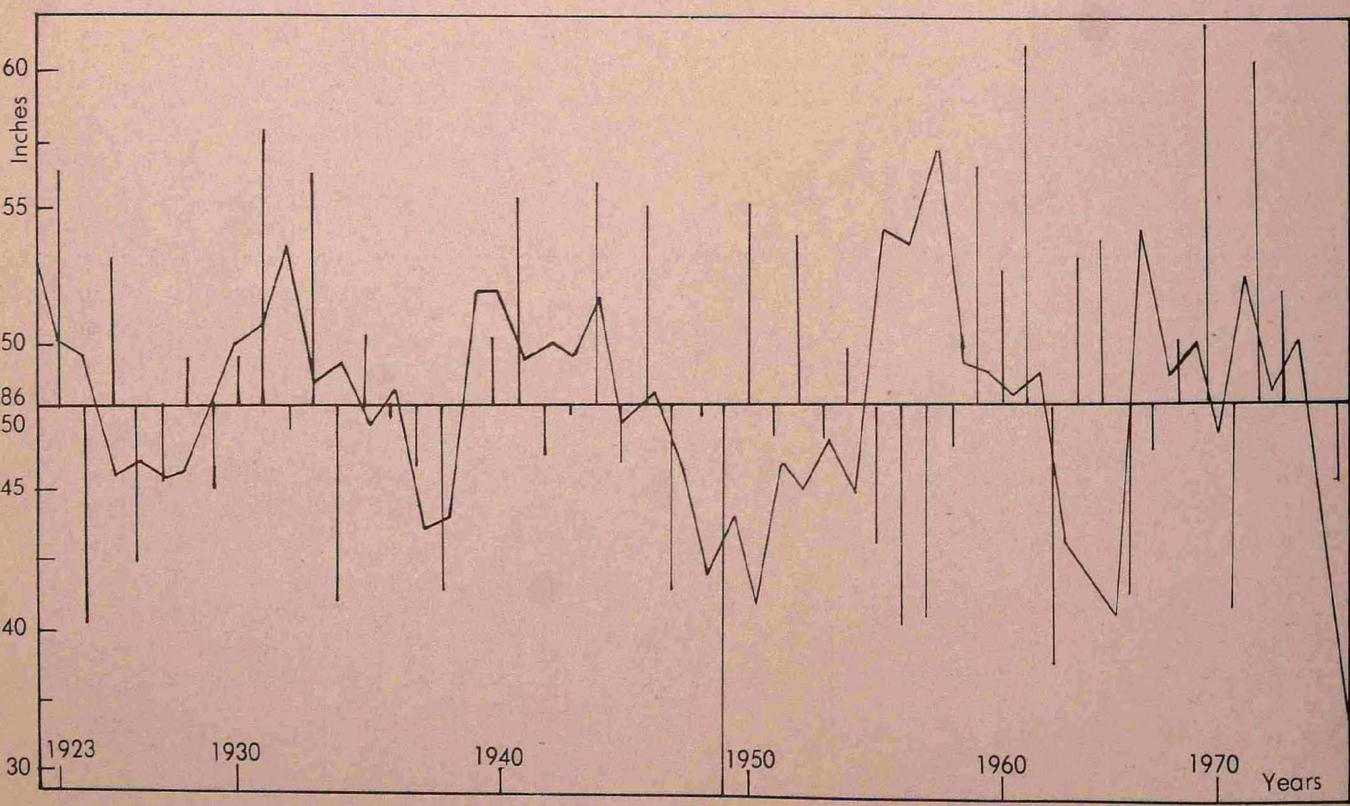


Plate 175 : *Average annual rainfall distribution in the Jaffna peninsula.*



During its late period, as the northern convergence zone approaches Sri Lanka on its southward march, rain is received. In the absence of orographic upliftment, the monsoon continues to be dry till the convergence zone provides the necessary conditions for uplifting. Hence, part of the rainfall recorded in the months of September and October is due to the 'Retreating Monsoon'. March-April and October are periods during which the island comes under the influence of normal convectional activity which induces a certain amount of rainfall. Thunderstorms are a common feature in these months and rainfall caused by this phenomenon tends to be of short duration but heavy and accompanied by strong winds, thunder and lightening. The northeast monsoon period is rainy too; but in the latter months the monsoon weakens considerably and therefore, the rain received during this phase is very limited. Cyclonic activity is one other cause for rainfall in this region. During the months of October-November, cyclones or tropical storms originate over the Bay of Bengal and traverse across the island or to the north of it. The highest frequency of these storms is recorded during the month of November during which the average is one per year while October records one for every two years. During the March-April period of equinoctial weather the frequency is one for every six years. These storms result in torrential downpours and some of the highest rainfall for a space of 24 hours has been recorded during the periods of such storms.

The rainfall distribution map of Jaffna peninsula shows (plate 175) that the mean annual rainfall in the western part is below 50 inches and that of the eastern part is 50-75 inches. However, it is not uncommon for the absolute total for a year to deviate either way from the mean annual for a station. Jaffna experienced a total of only 32.44 inches in the year 1936 and a total of 73.79 inches in 1932, in both the years the deviation being more than 20 inches from its mean annual of 53 inches.[14] The true nature of this variability can be observed further by examining the annual average rainfall and three year moving average curve for Jaffna for a period of forty years presented in Fig.7. The wet months as well as the dry months are equally subject to this vagary. In the light of this, the mean monthly or the mean annual rainfall cannot be considered a reliable indicator. It will be noted that every month shows a mean which is higher than the corresponding median point. It is therefore reasonable to conclude that the median point gives us a more reliable measure of rainfall expectancy than the means.

The mean (ten year) annual and the mean northeast monsoonal rainfall are shown below together with the yearly rainfall in 1976 and in 1968.[15]

It is found that the northeast monsoonal rainfall in the Peninsula (32 inches) forms 82% of the total annual rainfall (The seasonal rainfall exhibits a definite rhythmic pattern. There is however considerable variation from year to year. This variability of rainfall has always been a major hazard in agricultural enterprise in the area).

The next important consideration in this region is the effectiveness of rainfall. Owing to high incidence of sunshine with cloudless days, long periods of drought and high wind velocity, the loss of moisture due to evaporation is very extensive. Therefore, given the absolute rainfall, its effectiveness is not as much as it should be. B.H. Farmer[16] estimated that there are at least five months in a year when the effective rainfall is less than 30% for the 40 years considered. The problem of water for agricultural and other purposes for a continuous period of 5-6 months (April-September) is a serious one, assuming that in February and March one could depend on the surplus of the preceding season.

This problem in the Jaffna peninsula is offset to a degree by the use of the underground water in the limestone strata.

Soils

Geology as a soil characterising factor is best exemplified in the case of Jaffna soils associated with limestone parent material.

Red Soils

The red soils of Jaffna (similar to the terra rossa of the mediterranean region) are formed by the disintegration of limestone rocks. These are uniform in texture, colour etc; down to the parent rock which occurs at a depth from 1 foot to 30 feet from surface. The red soil is found usually on relatively higher areas. The red colour is due to the soil not being leached. These are rich in iron oxides as could be seen from the luxuriant growth of vegetables which contain more iron. These have rock fragments embedded in them and have to be dug and reclaimed before utilising for cultivation.

Grey Loams

In the comparatively low-lying (paddy) areas the wash from higher areas is deposited. Generally the paddy soils are either submerged under water or poorly drained. As a result, the soils are of the characteristic grey loams; the lower layers being bluish grey or dark in colour and mottled by brown hydrated oxides.

Both the soils derived from the parent limestone have a very fine texture permitting root development and aeration. The soil layer is on the whole, is not quite suited to extensive growth of trees but valuable for garden crops. Besides, the soils are not very fertile, lacking plant food and humus. Hence, the soil retains very little moisture especially during the dry period.

Other Kinds

The soils not directly derived or those that have undergone much modifications are grouped under this title. Along the northeast and southeast margins of the peninsula are extensive tracts of sand. They are mostly wind blown. In the narrow strip of land along the Lagoon the soil is alkaline. This is due to the salt water covering these parts.

Vegetation

The vegetation of the Jaffna peninsula is largely determined by climate, and on a broad view, rainfall is more important than temperature. Soil factors and topography are generally of secondary significance.

Much of the natural vegetation has been cleared now for agricultural practices. Some crophyte type of vegetation exists in the lands unsuitable for agriculture i.e. in sandy areas and in limestone wastes. At present there are two aspects of natural vegetation found in the peninsula.

1. Growth of mangrove in swamps : These are found in the Lagoons.
2. Scrubs and jungles : These are scattered in Pachilaippalli area on the way to Elephant Pass and Cundikkulam.

In the northern, western fringes and in many interior patches of the Peninsula, the limestone wastes contain little or no soil covering; hence tiny shrubs and cactus plants alone thrive. Palmyra palms too grow in these areas and their long roots force their way down to tap the water underneath the surface.

Surface Water

An examination of the one inch to one mile topographical maps of the Peninsula will show that it abounds with *kulams* (tanks). There are large and small tanks within the land area of 360 square miles (the Lagoons occupy the balance of the total 410 square miles of the Peninsula). Over 600 of them have been enumerated (of which only about 200 are in good function) that is, almost 2 for every square mile. Their aggregate storage capacity has been assessed as 10,000 ac. ft.[17] They border fields and water courses. The water courses are traditional cart-tracks to the *kulams* in the dry season. Eventually they become winding lanes and roadways as the *kulams* get encroached and they gradually dwindle to extinction.

These *kulams* are not man-made storage tanks as found elsewhere in the Island; Kulartnam[18] explains : 'The ponds are not depressions excavated by man to store rain water. The limestone is subject to chemical weathering under the action of rain water charged with carbondioxide from the air. As this water passes into rock, it dissolves into the rock and causes hallows and passages which become enlarged with the passage of time. The depressions, hollows and ponds of the north are thus natural features caused by the solution of the limestone and the collapse of the roofs of subterranean limestone cavitees (e.g., putter well)'.

He further mentions : 'The natural surface depressions, hollows and kulams act like funnels to conduct the surplus rain water underground. Naturally, therefore, the bottoms of these funnels should be kept clear of slit and clay deposits which could choke the underground passages and this reduces the amount of water that can flow down to the reservoir'. Therefore, the only use to which tanks could be put to is to augment the underground water supply in the Peninsula as they help to replenish the underground source.

Appendix II
Āṉaikkōṭṭai Seal

Plate 176 : *Enlarged photograph of the Āṉaikkōṭṭai seal, found in the Megalithic burial. The size of the seal is around 1.7 × 1.5 cm. This seems to be a portion of a signet ring. As this is a seal, the legend should be read in reverse. There are three ideograms in the first line and three Brahmi letters in the second.*



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In the first two weeks of December 1980 an archaeological survey team from the University of Jaffna in the northern most part of Sri Lanka brought to light an important megalithic burial complex at a place called Anaikkoddai, the first of its kind to be discovered in the Jaffna district. Among the unearthed articles in one of the burials, was a pre-Christian metal seal with two lines of writing.

While the newly-discovered megalithic burial complex is in itself of great significance to the archaeology of that district and has already created much excitement there, the metal seal, the significance of which is as yet unknown to many, appears to be an extraordinary find with implications for the study of the so-called non-Brahmi or graffiti marks found primarily on pottery in the megalithic sites of South India and Sri Lanka as well as in sites further north. It may even prove to be of interest to the students of the intriguing Indus script.

The inscription on the seal is deeply indited and well preserved. The second line of the inscription is clearly in Brahmi of about the third or second century B.C. It consists of three letters and an *anusvara* (*"pulli"* = dot). The first line consists of three characters or symbols, written in the same way as the ideograms on an Indus seal. What is interesting is that these are not unfamiliar characters, for they occur both among the numerous graffiti marks on megalithic pottery as well as among the Indus ideograms.

This is the first known instance of these symbols occurring on a seal in the form of an epigraph alongside a Brahmi inscription and hence the special significance of the seal. This poses a series of interesting questions.

One is no doubt tempted to ask whether we have at last stumbled upon a bi-lingual inscription in the Indus and Brahmi scripts. But we must leave this question aside for the moment. What is of immediate relevance is the question whether this will provide a clue to the proper understanding of the graffiti marks on the megalithic pottery of South India and Sri Lanka.

The so-called graffiti marks have been found on a large number of potsherds, both in the megalithic and pre-megalithic contexts in South Asia. The earliest material comes from the Indus Valley sites belonging to the Harappan culture and it continues in the post-Harappan chalcolithic cultures in Pakistan, Gujarat, Rajasthan and Maharashtra along the western side of the sub-continent. The later material belonging to the megalithic phase comes from Karnataka, Tamil Nadu and Sri Lanka in the southern part of the South Asian region.

For almost exactly a hundred years, scholars have shown interest in these graffiti marks and attempts were made to collect them and discover their significance. Perhaps the first attempt was made in 1881, and in recent years Mr.B.B.Lal, a former Director-General of Archaeology in India, made a systematic survey of these materials, which resulted in the publication of a 'preliminary note' entitled : 'From the megalithic to the Harappa : Tracing Back the Graffiti on the Pottery' More graffiti marks have

been discovered since and some of them have been published.

Mr.B.B.Lal's investigation revealed that "Out of the total of 61 symbols noted so far, as many as 47 are common to the megalithic pottery on the one hand and the Harappan and post-Harappan chalcolithic on the other". In terms of statistics, his conclusion was that 89 per cent of the megalithic symbols go back to the chalcolithic-Harappan times. And he concluded : "But to stress the point that the symbols do have a phonetic, syllabic or alphabetic value would indeed be presumptuous in the present state of our knowledge".

Writing about ten years later, Prof.T.V.Mahalingam, in his report on the Tirukkāmpuliyūr excavations, doubted that these graffiti had any association with script and concluded that "we may not be far wrong if we take the graffiti marks to represent such totemic symbols by the people of the ancient past".

Among those who investigated the meaning of these graffiti, it was Mr.G.Yazdani who more than 64 years ago, thought that these constituted a script and that these symbols were characters used to express ideas. Although later researchers tended to dismiss his view Mr.Yazdani's seems to be the most acceptable theory.

The Anaikkoddai seal seems to confirm Mr.Yazdani's view. So far scholars appear to have been misled by the notion that these symbols occur only on pottery. But their occurrence in a line on a seal, like letters in any short inscription and similar to those on the Indus Valley seals, together with another line in Brahmi — very much like the bi-lingual legends on a coin, indicates that these symbols were in fact used as characters in a script not only on pottery but also on other materials. That the symbols on the megalithic pottery stood for words or names is also confirmed by the occurrence of names in Brahmi scripts on potsherds of a slightly later period excavated in Arikamedu and elsewhere in Tamil Nadu as well as in Kantarodai, Anuradhapura and other sites in Sri Lanka. After the spread of Brahmi, naturally this phonetic script displaced the earlier symbols.

If as we are inclined to believe, the so-called graffiti marks on the megalithic pottery are ideograms or characters with meaning, they have to be evidently treated as survival of the Indus writing system. For, as we have seen, the vast majority of these graffiti could be traced back to the Indus ideograms and this is not a mere coincidence. Spatially as well as chronologically a relationship could be established between the two sets of characters. Spatially they extend from the Indus Valley right down the western part of India to the south and beyond to Sri Lanka. Chronologically they begin in the Third Millenium B.C. in the Harappan chalcolithic culture, continue into the post-Harappan phase, then into the megalithic phase and overlap into the period of the Brahmi script. The Anaikkoddai seal belongs to this final phase, after which the easy phonetic Brahmi script supplanted the more difficult character writing.

On this premise, the first line of the Anaikkoddai seal inscription consists of Indus-derived characters and each of them must have a value. Being a legend on a seal, they no doubt stand for a name. And the Brahmi writing in the second line obviously stands for the same name, as the case of the Greek and Brahmi legends on some of the coins of the Indo-Greek rulers, Pantaleon and Agathocles. So, for the first time we have a chance of deciphering one complete legend in the characters of this Indus-derived script with the aid of a Brahmi transliteration.

The inscription in Brahmi consists of three letters and an *anusvara*. They are crowded within a small space and the first letter, though at first sight it seems to present some difficulty in reading, shows on closer examinations all the features of the vowel-consonant *'Kō'*. The middle stroke of this letter is not horizontal but diagonal and the arm of the right (as it appears in negative on the seal) is not very prominent. The second letter is clearly *'vē'* and the third letter is a clear *'ta'*. There is a dot or *anusvara* above the letter *'ta'*. Two readings seem to be possible, depending on the point at which we read the *anusvara*. If we read it before *'ta'* the inscription would read as *'Kōvēnta'*, but if we read the anusvara after *'ta'*, the reading *'Kōvētaṉ'*, is possible. Either way, the word would be Dravidian and both readings would have the same meaning.

'Kōvēnta' consists of two words *'Kō'* and *"vēnta"*. *Kō* in Tamil and Malayalam means 'King' and is related to words in other lesser known Dravidian languages, such as *'Koc'* in Parji and *'Kosu'* in Gadba. *"Vēnta"* is no doubt a variant of or related to the Tamil and Malayalam *'vēntaṉ'*, *'Vēntu'*, also meaning 'king'. It is also related to the Parji word *'vedid'*, meaning 'good'. *"Kōvēnta"* would then appear to be a tautological

compound and it is interesting to note here that such a compound. *'Kōvētan'* as well as its variant form *'Kōvēntu'* does actually occur in the earliest literature of the Tamils.

In the reading *'Kōvētan'*, *'Kō'* is of course 'King' and *'Vētan'* would also mean 'King'. *"Vēntan"* (which could also be read as *"Vēttan"*, as the double consonants do not sometimes occur in the early Tamil-Brahmi inscriptions) is a variant of *"Vēntan"* and its root could clearly be seen in such ancient Tamil *"vētālikar"* (*vētu* (or *vēta*) + *alikar* — king's clowns or dancers). *"Vētan"* has to be split as *vētu* (or *vēta*) + *"an"* the *'an'* being the masculine singular ending. If as is obvious the name on the seal is Old Tamil or Proto-Malayalam then the second reading namely *"Kōvētan"* is preferable to the first which has no masculine singular ending. But the first reading is possible if the name is in some other Dravidian language, including Proto-Tamil. While *"Kōvēnta"* could be meaningfully split into only two parts (*'Kō'* and *'vēnta'*), *"Kōvētan"* could be split into three parts going by some of the forms of the masculine nouns in the early Tamil-Brahmi inscriptions of Tamil Nadu. The three parts are *"Kō"*, *"vēta"*, *"an"*, comparable to *"asiriyku-an"*, *"Pāna-an"* and *"Kaṭala-an"* in the Mankulam Inscription No. 1. This accords well with the occurrence of three characters in the first line on the seal as the equivalent of the name in Brahmi. We are therefore, inclined to adopt the reading *"Kōvētan"*.

Now, coming to the character in the first line, we see that the first two are identical, formed like a trident. Being ideograms or characters, they have no fixed phonetic value but stand for particular words or ideas. The occurrence of two identical characters is only to be expected. If the name in Brahmi as we have seen is a tautological compound *"Kō"*, is 'king' and *"Vēta"* (*'vēntan' 'vēntu' 'vēttu'*) is also 'King'. If the trident-shaped character stood for a king, naturally both *'kō'* and *'vēta'* have to be represented by the same symbol, although the phonetic values are different. We have the analogy of several such words in the present day Chinese-Japanese characters. The final character on the seal shaped like a simple bracket, seems to be the equivalent of the masculine singular ending — 'an'.

As mentioned at the outset, the characters in this seal inscription occur in the Indus seals as well. The trident-shaped character, according to Mr. Iravatham Mahadevan's "Concordance", occurs in 212 instances in the Indus seals. The bracket-like character, however, occurs only once. The first one, it may be noted here, occurs even in clusters of four. In the post-Harappan sites as Rangpur, Navdatoli and Saragwala (Lothal). In the megalithic phase this occurs in Sanur, Tirukkampuliyur and other sites in South India. While in Sri Lanka it has been noticed in Anaikkoddai, Karainagar and elsewhere.

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Regarding the decipherment of the Anaikkoddai Indus-Brahmi Seal (The Hindu 26-04-1981), a few more readings can be suggested. The dot which Dr. Indrapala has taken as an *anusvara* for the Brahmi legend of the second line, can also be a part of the third Indus sign of the first line. In that case the third sign of the first line is a combination of a dot and an English 'C' like character. This sign very often comes in the Indus seals in various stylized forms and in most occasions at the end of a legend as in the case of this seal. So now, there are three Indus signs in the first line, and three Brahmi letters in the second line, but no *anusvara*.

These Brahmi characters are normally read as *'KŌ' 'VĒ' 'TA'*. If split, they will be *KŌ* + *VĒT* + *A*. The suffix *'A'* is a sixth case ending which is very familiar in the Tamil Brahmi inscriptions and still prevails in the Kannada language. The meaning derives here goes as 'The property of *'Kōvēt'*, (*'Kōvēntanudaiya'* in the developed Tamil) and legends of such case ending are commonly found elsewhere. In this decipherment, while assigning the Brahmi values to the Indus signs, *'KŌ'* and *'VĒT'* are represented respectively by the two tridents, and the sixth case suffix *'A'* is indicated by the third sign.

Even if we take the dot of the first line separately as an *anusvara* to be read after the Brahmi *'TA'*, I am doubtful whether it can end as *'TAṈ'*. There is no precedence for the use of *anusvara* to indicate the Tamil *'Ṉ'*. In Tamil Brahmi there is a separate script for this sound. So here, if the dot is taken as an anusvara after the Brahmi *'TA'*, the conventional reading is 'KŌVĒTAM' and this can be split as *KŌ + VĒT + AM*. The suffix *'AM'* is actually the same as *'AṈ'*, and comes to indicate singular masculine ending in Dravidian tongues and especially can be cited in the early Kannaḍa inscriptions (*Arasaṉ-Arasam, Rāsam; Makaṉ-Makam; Mārtānḍaṉ-Mārtānḍam*). So we need not read the dot voluntarily as consonant *'Ṉ'* to see the legend ending with a Dravidian suffix. The usual value 'M' itself is a Dravidian suffix.

It is significant to note that several coins found in the extreme south of India in the Thirunelvely district of Tamil Nadu have such symbols, and here this trident symbol often comes either in the beginning or in the end which recalls to us the names of the early Tamil Kings.

The survival of this *'trisūla'* symbol for the concept of *'KŌ'* is very interesting. *KŌ* stands for both God and King and the very Tamil term *'Kōvēntaṉ'* itself is a derivation of the God-King concept which prevailed in the early civilizations. In the Jaffna peninsula, all the minor deities who are actually the survivals of primitive religion, irrespective of their names and forms, are being worshipped by this symbol of *'trisūla'*.

The decipherment of this seal also helps us to understand the formation of Caṅkam Tamil. Previously there was a question as to why the language of the Tamil Brahmi inscriptions are in a split form while the contemporary literature points to a refined language. Now it is presumable that it happened because of this ideographic writing. Even after the introduction of Brahmi, during the transitional period, the common man's written language was in the old split form. (i.e. *kaḍal aṉ, ikuv aṉ, pāṉ aṉ*). Thus, the language of the Tamil Brahmi inscriptions can be considered as a survival of still earlier forms.

Probably, it was those great poets who were the pioneers of the then society, conducted experiments in the language, using the Brahmi script and elevating the proto Dravidian to the status of Caṅkam Tamil.

Anyway, here the language we get in the Āṉaikkōṭṭai seal can be preferably called as proto Dravidian. It can be a local form that prevailed in the Jaffna peninsula which was then known as the island of the Nākās.

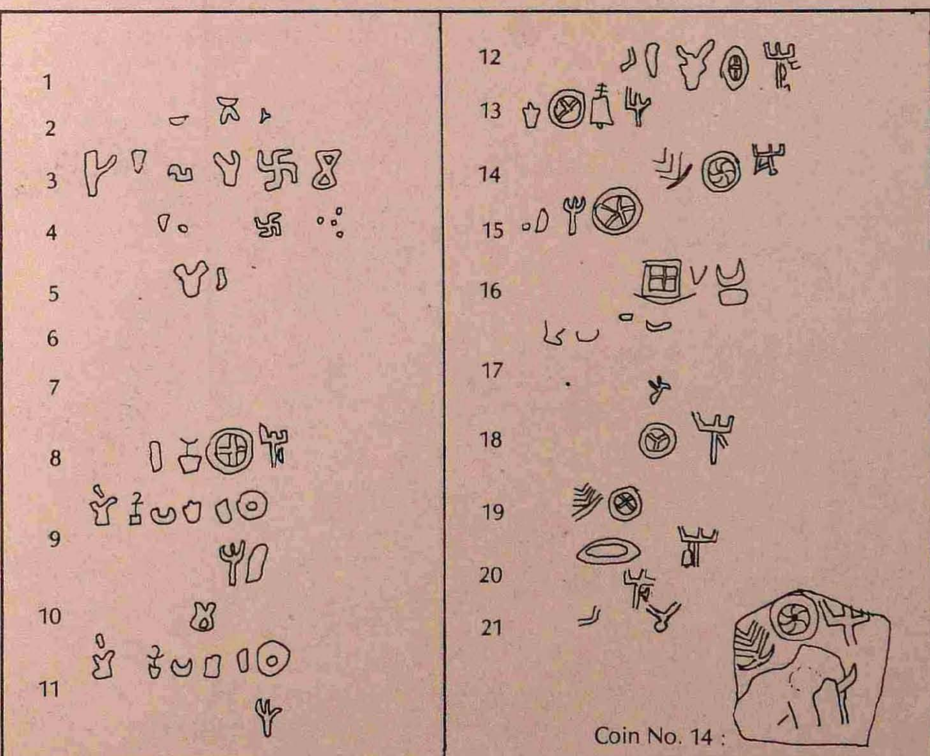
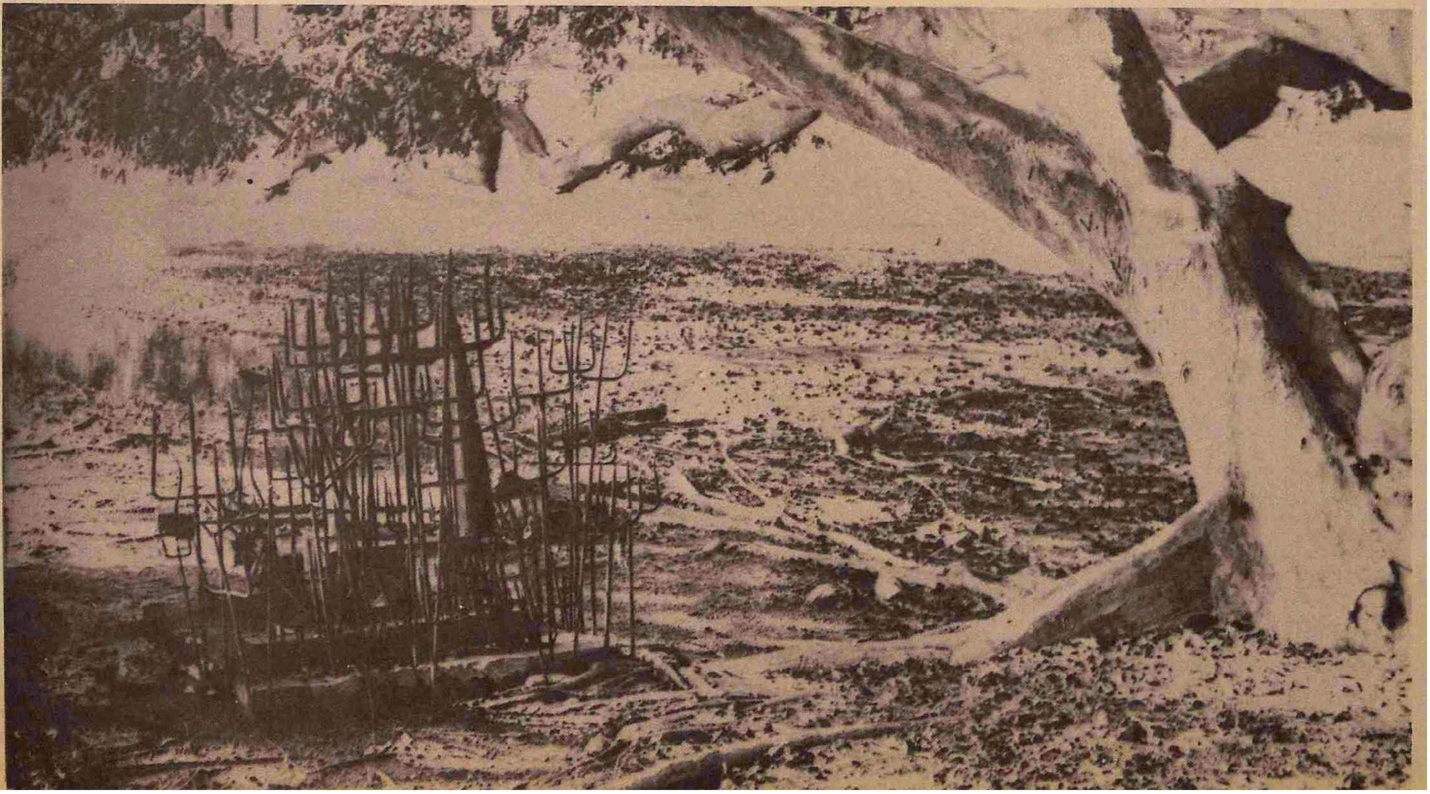


***Plate 177**: Ideographic coin legends (not punch marks) found in the ancient coins from the extreme south of India. These coins from the Tirunelvēli region of Tamil Nadu, are now at the Government museum, Bangalore. These legends are reproduced from the Annual Report of the Mysore Archaeological Department 1935, pp. 65-69. In the report a question has been put forth "could they be the names of the Korkai Pandya rulers or even earlier kings of the extreme south of India?". Note that the trisula symbol appears mostly towards the end of the legends, recollecting the names of the rulers of Caṅkam Age, which end with the suffix 'Kō'.*

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The unearthing of an inscribed metal seal during excavations at a megalithic burial site in Anaikkodai, Jaffna District, Sri Lanka, may yet turn out to be epoch-making though it must be admitted that scholarly reaction to its exposure has thus far been on a surprisingly low key. The first writer on this seal, K. Indrapala, would have us believe that the three Brahmi letters which make up the second line of the text, belong to the 3rd century B.C. Since none of them is a test letter, and in view of the fact that the seal itself was found in a proven megalithic site, nothing precludes the tentative acceptance of the suggested date. After himself suggesting two alternatives, the scholar adopts the reading 'kōvētan̠' as the more likely one, though he does not adduce reason for taking a mere dot to represent the final consonant n. Since 'kō', and 'vēta' both mean 'king' in Tamil, he takes the two trident-like symbols on the top line also to be ideographic symbols standing for 'king'. Armed with these conclusions, Indrapala poses a very typical as well as topical question as to whether we have at last stumbled upon a bilingual inscription in the Indus and Brahmi scripts. Like some other exasperated scholars in the field, I too have come to believe, after protracted exertions, that the Indus symbols are purely ideographic and never carried any phonetic values at any stage in their usage. We have got to make them yield sense by subjecting them strictly to provenance-cum-context oriented ideographic and, in some cases, pictographic-cum-ideographic interpretation. It is in no way unnatural that these symbols had travelled far and wide spatially and, in terms of time, had preceded and outlived the Indus civilization itself. If the trident mark symbolised the 'king' for the megalithic people of the lower tip of South Asia, and if there was need to put down the name of Kōvētan̠ in ideograms, what would have inevitably resulted is the Anaikkodai seal. However, whether the trident symbol represented the 'king' even for the Indus people is indeed a moot point.

Plate 178 : *A cluster of trisulas seen under a 'marutu' tree at Nākarkōyil. Trident was the earliest symbol of God found in Jaffna during the Megalithic times. Even today, worship of trisula is the most popular form of folk religion, suggesting a continuity. In Jaffna, various folk deities are being worshipped in the form of trisūla, irrespective of the names. Many house premises have a corner allotted for the worship of trisūla. The phonetic value 'KŌ' we get from the Ān̠aikkōṭṭai seal for the trisūla ideogram, points to the etymology of the Tamil word 'Kōyil' (temple/palace). 'Kō' — God/king; 'il' — house;.*



Appendix III

C14 Dates For Kantarōṭai

RADIOCARBON DATES FROM KANTARODAI, SRI LANKA (CEYLON) 1977

P. No.	Sample No.	Trench	Stratum	Pretreatment	5568 Half-life B.P.	1950 A.D/B.C.	5730 Half-life A.D./B.C.	MASCA Corr[1] A.D./B.C.
P-2521	4	A	IV	—	2020 ± 50	70 B.C.	140 ± 50 B.C.	10- 100 ± ,50 B.C.
P-2518	5	A	IV	NaOH	2290 ± 50	340 B.C.	410 ± 50 B.C.	420 ± 50 B.C.
P-2520	8	A	V	—	2180 ± 60	230 B.C.	290 ± 60 B.C.	270- 390 ± 60 B.C.
P-2524	9	A	VI	—	2340 ± 50	390 B.C.	460 ± 30 B.C.	440 ± 50 B.C.
P-2514	1	B	V	—	2250 ± 60	300 B.C.	370 ± 60 B.C.	410 ± 60 B.C.
P-2515	2	B	VI	—	2990 ± 60	1040 B.C.	1130 ± 60 B.C.	1290 ± 60 B.C.
P-2516	3	B	VI	NaOH	2070 ± 60	120 B.C.	180 ± 60 B.C.	130 ± 60 B.C.
P-2522	7	B	VII	—	2110 ± 60	150 B.C.	220 ± 60 B.C.	170- 200 ± 60 B.C.
P-2523	15	B	VIII	—	2060 ± 50	110 B.C.	170 ± 60 B.C.	120- 140 ± 60 B.C.
P-2525	16	B	VIII	—	2730 ± 220*	780 B.C.	870 ± 220 B.C.	940- 980 ± 220 B.C.
P-2519	17	B	IX	NaOH	2290 ± 60	340 B.C.	410 ± 60 B.C.	420 ± 60 B.C.
P-2528	19	B	XI	—	2370 ± 60	420 B.C.	500 ± 60 B.C.	480 ± 60 B.C.
P-2526	18	B	X	—	2090 ± 50	140 B.C.	200 ± 60 B.C.	140- 190 ± 50 B.C.
P-2529	6	X	III	—	2350 ± 200*	400 B.C.	470 ± 210 B.C.	440- 460 ± 210 B.C.
P-2517	12	X	IV or V	NaOH	2250 ± 50	300 B.C.	370 ± 50 B.C.	410 ± 50 B.C.
P-2527	11	X	IV or V	Too Small				

* Large tolerance due to small sample size necessitating counting in small counter.

1 For explanation of MASCA corrections see *MASCA Newsletter*, 1973, Vol.9, No.1, p.1-20.

Courtesy : To S.U. Deraniyagala who made this document available.



Plate179 :A drummer from Kārainagar, Jaffna. Being one of the aborigines of Jaffna, the drummers (*Parayars*) still retain a dialect which has a number of archaic Tamil words and a few Prakrit words. Besides drumming at funerals and folk temples, they were heralds and traditional weavers. Some among them practised native medicine and astrology. The chief of this community used to maintain the genealogical records of the Veḷḷāḷa chieftains. Even today, they have their own shrines dedicated to the deity 'Valliyakkan' ('Val-Iyakkan'; mighty 'Yaksha') and the priest is known as 'Vaḷḷuvak kurukkaḷ'.

Appendix IV

Society in Jaffna in 1790 A.D.

Plate 180: *Fishing was an early subsistence activity in Jaffna. In a caste-wise census, the fisher-folk is found to be the second largest population in Jaffna next to Veḷḷāḷās — the cultivators. photograph Maṇal Kāṭu.*



A caste-wise census was conducted in Jaffna by the Dutch to collect poll tax in 1790 A.D.. The numbers include all the males in the age group 16-70. This list has been extracted from A. Mootootamby Pillay's Jaffna History published in 1912, and re-arranged here with notes.

Vēḷāḷar **15170**

Cultivators — the dominant community in the caste heirarchy of Jaffna. The chieftains of this caste bear a title *mutali.* The clan-names among the *Veḷḷāḷars* indicate some connections with the *Toṇṭai nāṭu* region (*Kāñci* region) of Tamil Nadu. A link between the history of *Toṇṭai nāṭu* and Jaffna finds reference in the post-*cankam* Tamil literature *Maṇimēkalai* as well as in the folk legends of the *Toṇṭai Maṇṭala Veḷḷālar. Pāṇṭi Malavar, Cittiramēḻiyār* and *Cāliyar* are the other clans of *Veḷḷāḷar* found in Jaffna. *Cittiramēḻiyar* are survivors of an ancient agrarian guild. They still retain a village near Iḷavālai. *Cāliyar* seem to be aboriginal cultivators. Their distribution is noticed in Jaffna along the traditional paddy-field stretches. *Cāli* is an ancient Tamil word for paddy. This caste is mentioned in the early Brahmi inscriptions of Sri Lanka. At Paccilaippaḷḷi, this caste is known as *Paccaricic-Cāliyar* (*Paccarici* — raw rice). Though the Jaffna *Veḷḷāḷars* were originally paddy cultivators, by the time this census was taken, cultivating tobacco, horticulture and trade became their predominant activities.

Maṭaippaḷḷiyār **5528**

Household servants to *Veḷḷāḷar.* This caste gradually became *Veḷḷāḷar* in the recent past.

Kōviyar **1429**

Household servants to *Veḷḷāḷar. They were listed as Corve* (slave in Portuguese language) in the Portuguese records. Hence, they became *Kōviyar.* [1]

Taṉakkārar **388**

Also known as *Tāṉattār* (temple servants?). The caste is mentioned in the Cōḻa inscriptions. A few families still retain this name. At some places they are identified with the *Kōviyar.*

Brahmins **639**

The Brahmins were never a dominant community in Jaffna. Most of the old Brahmin families were brought in during the times of the kingdom of Jaffna. Some of these old families are found at Māviṭṭapuram, Kīrimalai, Kārainagar, Karaṇavāi and Kokkuvil.

Ceṭṭikal **1667**

Traditional Tamil merchants. Sea-trade was their forte. *Vaitilinkac Ceṭṭiyār* of Jaffna, who undertook pearl contract was one of the richest persons in Sri Lanka when this census was taken. They were involved in the construction of many temples and schools in Jaffna. The *ceṭṭi* community declined with the downfall of sea-trade in Jaffna and only a few families remain now.

Cōṉakar **492**

Muslims. The concentration of this community was earlier at Ussan in Tenmarātci and later at Nallūr. They shifted to the neighbourhood of the Jaffna fort when Nallūr was replaced by Jaffna city as capital.

Malayakattār **1240**

? Probably Malayalis. There were flourishing trade connections between Jaffna and Kerala by this time.

Paratecikal **1949**

Foreigners

Karaiyār **3009**

Deep-sea fishermen and navigators. They are also known as *Kurukulattār.* This community is akin to the *Kurukulasūryās* and *Varṇakulasūryās* who were till recently Tamil speaking folk in the southwestern coast of Sri Lanka. In numbers and influence this community comes next to the *Veḷḷāḷars* in Jaffna. Even in the times of the kingdom of Jaffna, they had their own kinglet. There are two sections among them known as *Mēlōṅki and Kīḻōṅki.* The decline of sea-trade had severely affected this community in the recent decades.

Mukkiyar **1159**

Conch-shell and pearl divers. They gained the name because of keeping their breath under the waters (*mukku* — keeping the breath). In those days Jaffna was known for conch-shell fishing and export. After the decline of this trade, *mukkiyar* took to fishing.

Timilar **576**

Shallow-water fishermen, who were engaged in subsistence fishing. *Timil* is an ancient Tamil word for a canoe or a small round boat (*parical*).

Paravar **351**

Fisher folk gained their name from the ancient Tamil word *Paravai* (sea).

Parampar **8**

Supposed to be the earliest fisher folk in Jaffna. They are lagoon fishermen and gained their name through a lagoon fishing technique known as *parampu.* Similar to *Varampu* (baulk) in the paddy-fields, they erect *parampu* by nets and sticks in the lagoon to trap fish. A few families at Cāvaṟkaṭṭu near the lagoon at Āṉaikkōṭṭai still retain this caste name. They are the only survivors of this caste in Jaffna.

Valayar **7**

Fishermen using nets.

Cempaṭavar **14**

Subistence fishermen mainly fish in the pools, ponds and backwaters.

Paḷḷivili **196**

? Subsistence fishermen

Taṭṭār **337**

Goldsmiths

Kaṉṉār **63**

Coppersmiths

Kollar **407**

Blacksmiths. The iron industry, using local raw-material was popular in Jaffna. The products were then known as *Īḻattu Irumpu.*

Kuyavar **186**

Potters

Kaṭaiyaṟkārar **16**

Cuṇṇam (lime) grinders, who prepared the lime plaster (*Kaṭai* — grind).

Varṇakārar **27**

Painters

Tantakārar **21**

Ivory craftsmen

Taccar **536**

Carpenters

Oṭāvi (Sinhala) **1**

? Carpenter

Maṟavar **49**

Professional soldiers

Vēṭṭaikkārar **6**

Hunters

Tamiḻ Vaṭaciṟai **279**

Probably soldiers of the Cōḻa times. Later, identified with *Kōviyars.*

Kaikkōḷar **379**

Also known as *ceṅkuntar.* They were soldiers during war and weavers in peace times. They were probably settlers in Cōḻa Times. The concentration of this caste is found near Nallūr.

Cēṇiyar **100**

Weavers

Cāyakkārar **118**

Dyers. The indigo industry declined with the advent of chemical dyeing. *Cāya* root is a natural vegetation, abundantly found in Jaffna. This industry was so popular in Jaffna that even the king of Jaffna was called by the Portuguese as *Cāya Rāja.* In the Dutch times, textiles were imported into Jaffna to dye and re-export.

Vaṇṇār **857**

Washermen. Some of them were engaged in the indigo industry.

Ampaṭṭar **510**

Barbers

Naḷavar **2167**

Toddy-tappers. This is another indigenous community of Jaffna. In numerical strength, *Naḷavar* and *Paḷḷar* rank third in Jaffna. There are different versions about the origins of the name *Naḷavar.* It is said that they slip from the trees, hence *Naḷavar* (*Naḷuvu* — slip). Another version says that the term derived from *Naṟavar* (*Naṟavu* — toddy in ancient Tamil).[2]

Tampēṛu Naḷavar **66**

?

Kōṭṭai Vāyil naḷavar **265**

Nalavar in the service of the fort, probably as soldiers. *Naḷavar* were also mercenaries in earlier times.

Pallar 1359

Agrarian labourers. They gained the name because of working in the low-lying paddy-fields (*pallam* — low-lying). With the decline of paddy cultivation in the Peninsula, some of them took to toddy-tapping and fishing.

Cāyavēr Pallar 367

Also known as *Vērkkutti,* they collected the roots of the indigo plant for the dye-industry. A section of *Pallar* who took to this work became *Vērkutti Pallar* or *Cāyavēr Pallar.*

Kōttai Vāyil Pallar 20

Pallar who were in the service of the fort.

Tampēru Pallar 91

?

Kutippallar 155

Pallar in the service of *Vellala* families.

Parayar 767

Drummers. The *parayars* of Jaffna seem to be one of the aborigines. In Jaffna, still they retain a dialect which has a number of archaic Tamil words and a few Prakrit words. They were heralds and traditional weavers in the Jaffna society. Some among them practised native medicine and astrology. The chief of this community used to maintain the genealogical records of the *Vellāla* chieftains. Even today, they have their own shrines dedicated to the deity *Valliyakkan* (mighty *yaksha*) and the priest is known as *Valluvak kurukkal.*

Cāyavēr Parayar 208

A section of *Parayar* who took to *caya* root digging. They were also known as *Vērkkutti.*

Arch Kōyil Parayar 3

Church *Parayar*

Kulikarap Parayar 7

? Probably, a section of *Parayar* who were engaged in trench-weaving (*Kuli-Necavu*).

Cānrār 137

Originally toddy tappers or tree-climbers especially assocaited with coconut palms. later they took to oil milling industry. This was probably due to their association with coconut copra, but, in recent times their specialisation is in gingely-oil milling.

Kayirruc Cānrār

Cānrār engaged in coir industry.

Yānaikkārac Cānrār 70

Cānrār connected with the maintenance of elephants. In late medieval times, Jaffna was known for the trade of elephants brought from the forests of Vanni. Before export, they were temporarily kept at Jaffna and fed with coconut palm leaves. Hence, *Cānrār* were associated with their maintenance.

Kuravar 187

Gypsy migrants

Kadaiyar 351

? Probably, as same as the *Kataiyarkārar.*

Turumpar 51

One of the lowest in the caste heirarchy. They were scavengers earlier and later took to washing clothes to the lower castes. A few families still retain this caste name in Jaffna.

Parangi atimai 18

Slaves to the Portuguese.

Tavacikal 192

Hermits. probably denoting the caste of *Pantaram* in Jaffna. There are two sections among the *Pantāram.* The influencial section is the *Vīra Saiva Pantāram,* who came here probably in the Vijayanagara times as bearers of *Lingāyat* (*Vīra Saiva*) ideology. This section retains a peculiar dialect among them which has a few Kannada words. The other section is *Cankūti Pantāram* or *Ānti Pantāram* who blow conches.

Pānar 7

An ancient Tamil community of musicians. According to the historiographical literature of Jaffna, the place-name Yālppānam for Jaffna derived from the name of such a musician Yālpāti or Yālpānan (yāl-lyre) who received Jaffna as a gift from a king of Katiramalai.

Nattuvar

This caste is not mentioned in this list of Dutch times. Probably they arrived in later times with the Sanskritisation of temples. There are two sections among them; *Nattuvar* and *Ōccar* (*Uvaccar*). The *Ōccar* played the old *sruti* pipe (*Ūmaikkulal/Ottu*) that accompanied *Nātasvaram.*

Appendix V

Place Names in Jaffna

Place-names connected to settlements

Aṭaippu:

an enclosed area. **eg. 1.** *Vaṭali aṭaippu:* land enclosed by palmyras. (*Vaṭali* — young palmyra. *Aṭaippu* is also a Jaffna usage for cadjan fences).

Ālai:

A factory in modern Tamil, but, occurs as a suffix to settlement-names in Jaffna. **eg. 1.** *Ēḻalai:* seven settlements; **2.** *Iḷavālai:* new settlement; **3.** *Tuṉṉālai:* three settlements (*tuṉ*, Pkt. — three); **4.** *Paṉṉālai:* many settlements.

Il:

A house in standard Tamil, but, occurs as a place-name suffix in Jaffna. **eg. 1.** *Nittil*; **2.** *Tūmpil.*

Ūr/Ūri:

Village. **eg. 1.** *Nallūr*; **2.** *Māpāṇaūri* (*Māpāṇaṉ — Perumpāṇaṉ:* a tribe of musicians mentioned in the *Caṅkam* literature).

Kaṭavai:

A pass. In Jaffna it also denotes a settlement on the way. The road from Tellippaḻai to Aḷaveṭṭi has several *kaṭavais,* each denoting settlements of different castes. **eg. 1.** *Paṛayakaṭavai;* **2.** *Taṭṭākaṭavai;* **3.** *Kōviyakaṭavai;* **4.** *Naṭṭuvakaṭavai;* **5.** *Paṇṭarakaṭavai;* **6.** *Ampaṭṭa-kaṭavai;* etc.

Kōṭṭai:

Fort, originated from *Kō* — ruler. **eg. 1.** *Vaṭṭukkōṭṭai;* **2.** *Āṉaikkōṭṭai.*

Kōyil:

Temple (*Kō* — God/king; *Il* — House). The name of the temple became the name of the village. **eg. 1.** *Nākarkōyil.*

Cīma:

Cīrmai — prosperous land; *Cīmai* in Tamil Nadu; *Cīmai* also means a foreign country in modern Tamil. In Jaffna, *Cīma* is a place-name suffix. **eg. 1.** *Kūttaṉ cīma:* prosperous village of an artist. This particular settlement is inhabited by the *Naṭṭuvars.*

Nakar/Nakari:

Urban centre. **eg. 1.** *Kurunakar:* Town belongs to the *Karaiyār* (*Kuru Kurukulattār* — Karaiyār); **2.** *Pūnakari:* town of flowers.

Panti/Pantanai:

A shed. This became a place-name suffix. **eg. 1.** *Āṉaippanti:* elephant stable; **2.** *Nīlippantanai;* A place at Kārainagar where a temple for *Nīli* (a folk deity) is found.

Paḻai:

An ancient Tamil word for a settlement. **eg. 1.** *Tellippaḻai* (*Telli* — a fragile woman); **2.** *Pulōppaḻai* (see *pulam*); **3.** *Tumpaḻai* (*tun* — three; see *Tunnālai*).

Paḷḷi:

An ancient Tamil word for a resting place. Originally a place of eternal rest (root; *paḷḷam*, a trench where the dead is buried). Later the word denoted places donated to the Buddhist and Jaina monks to dwell. It also stood for places of Buddhist, Jaina and Vaishnava temples. *Paḷḷi* is also a school originated from the Jaina *Paḷḷis* where the monks taught to students. In Jaffna, it occurs as a place-name suffix. **eg. 1.** *Paccilaippaḷḷi* (*paccilai* — green leaf). This was probably a place of a Vaishnava temple (*Ālilaippaḷḷi kōṇṭāṉ* — Vishṇu).

Paṟṟu:

Property (derived from *paṟṟu* — grab). **eg. 1.** *Cempiyaṉ paṟṟu:* property of a Cōḻa (*cempiyaṉ* — Cōḻa); **2.** *Kōyil paṟṟu:* property of a temple.

Paṇṇai:

A farm in modern Tamil; occurs as a settlement name in Jaffna. **eg. 1.** *Vaṇṇārpaṇṇai* (*Vaṇṇār* — washermen); **2.** *Paṇṇaitturai.*

Pāy:

a mat or a seat in modern Tamil usage. In Jaffna, it comes as a place-name suffix, standing for a residence. **eg. 1.** *Kōpāy;* king's residence (*Kō* — king). When *Nallūr* was the capital, the king's residence was here.

Puram:

Fort/Walled settlement. **eg. 1.** *Māviṭṭapuram;* **2.** *Cuḻipuram* (*cuḻi* — Cōḻa); **3.** *Tolpuram* (*tol* — old).

Vaḷai:

An enclave/Fort. **eg. 1.** *Kalvaḷai* (see Kalvalai site report); **2.** *Āḻiyavaḷai* : an enclave near to the sea. (This is the *Vettilaikkēṇi* fort site. *Āḻi* — an ancient Tamil word for sea).

Vaḷavu:

An enclosed land. A residence with fenced premises (root — *Vaḷai*) **eg. 1.** *Kāsivaḷavu;* **2.** *Pokkai Vaḷavu:* a shallow land where water stagnates (*pokkai* — *pokkaṇai* — *pokkuṇa:* Pkt — *pushkaraṇi:* Skt.).

Place-names connected to Water Resources

Āvi:

Water resource, pond, *Kuḷam. Āvi* is the archaic Tamil form of *vāvi.* It is *Bāvi* in Kannada and *veva* in Sinhalese. **eg. 1.** *Nirāviyaṭi;* **2.** *Mallāvi:* flower pond (Tamil: *malar* — flower. *Mal* is the archaic form still found in Sinhalese).

Āli:

Spring. This is another ancient Tamil word for a water resource, especially a spring. (Root: *āl* — moving). **eg. 1.** *Palāli;* **2.** *Kiḷāli;* **3.** *Ōvāli;* **4.** *Navāli;* **5.** *Pulōli (pula-āli;* see *Pulam).* In all these places sink-holes are found.

Ūraṇi:

Drinking-water source. (*Ūraṇi; ūr* — village; *uṇi* — suitable for consumption; water consumed by the villagers.) **eg. 1.** *Ūraṇi* near *Mayiliṭṭi.* At this place the limestone groundwater discharges into the sea through caverns in the cliff.

Ōṭai:

Flood outlet. (Root: *ōṭu* — run; *ōṭai* — running water) **eg. 1.** *Kantarōṭai;* **2.** *Kaḷaiyōṭai.* The major flood outlet *Vaḻukkiyāṟu* courses through these villages.

Oḻunkai:

Flood outlet; also used as a path when there are no floods. At present the term stands for a by-lane, as most of the flood outlets have become by-lanes in the recent past. (root: *oḻukku* — drippings. *Oḻukkai* stands for a flood outlet in the Cōḻa inscriptions). **e.g. 1.** *Ōṭai oḻuṅkai* at *Vannārpannai;* **2.** *Kalaṭṭi oḻuṅkai* (flood outlet in a terrain of limestone outcrops).

Kattu/Kattuvaṉ:

A bund across a flood outlet. (*kaṭṭu* — construct. In Vaṉṉi, *kaṭṭu* denotes a dam). **eg. 1.** *Puṉṉālaikkaṭṭuvaṉ;* **2.** *Kallākkaṭṭuvaṉ* (stone bund); **3.** *Kaṭṭuṭai* (*kaṭṭu-ōṭai*).

Kuḷam:

Pond/Tank. **eg. 1.** *Pirappaṅkuḷam* (*pirampu* — cane); **2.** *Puṅkaṅkuḷam* (*puṅku* — a tree).

Kuṇṭu:

Sink-hole. **eg. 1.** *Cempaṉ kuṇṭu* (*Cempaṉ* — Cōḻaṉ)

Kēṇi:

A constructed pond (Root: *Kēṉ nīr* — desirable water; *kēn* — friendly/desirable; *nir* — water). **eg. 1.** *Cittaṉkēṇi.*

Pokkaṇai:

Deep pond/Sink-hole (*Pushkaraṇi* in Sanskrit; *Pokkuṇa* in Prakrit and Sinhalese; *Pokkaṇai/Pokkai* in Tamil. In Jaffna a deep wooden mortar is known as *pokkaṇai ural.* An old person's teethless mouth is known as *pokkai vai.* **eg. 1.** *Pokkai vaḷavu* at Cāvakaccēri (see *Vaḷavu*); **2.** *Puḷiyam pokkaṇai* in Vaṉṉi.

Mōṭṭai:

A shallow pond with plants. **eg. 1.** *Īccamōṭṭai* (*īncu* — a shrub).

Tuṟai:

Port. **eg. 1.** *Kankēcaṉtuṟai;* **2.** *Paruttittuṟai* (*parutti* — cotton); **3.** *Uṭutturai* (*uṭai* — acacia); **4.** *Navāntuṟai* (*navai* — vessel).

Toṭuvāi:

Reaching/Touching point in a coastal area. (*Toṭu* — touch). Probably the Sinhalese term *toṭṭa* or *toṭṭuva* for a port is related to this root. **eg. 1.** *Nallataṇṇi toṭuvāi* near *Cālai.*

Vil:

Pond/Tank. *Vil* is a naturally formed, shallow, water-stagnant spot, converted into a pond by erecting a bow-like bund. This was a primitive mode of tank-irrigation practised since Megalithic times. The term originated from the Tamil word *vil* for bow. it became *vila* in Sinhalese. In the place-names, *Vil* mostly comes as

suffix. The prefix of such names usually denote a fauna or flora associated with the pond. The names of these ponds became the names of the villages. This is a popular place-name suffix in Jaffna.

eg. 1. *Kokkuvil;* crane pond (*kokku* — crane); **2.** *Nantāvil:* perennial pond (similar to *Nantāviḷakku* — perpetual lamp); **3.** *Maṭṭuvil:* honey pond (*maṭṭu* — honey); **4.** *Uṭuvil;* acacia pond (acacia, a thorny bush, *uṭai* in Tamil and *uṭa* in Sinhalese); **5.** *Iṇuvil;* twin pond (*iṇai* — twin); **6.** *Manṭuvil;* frog pond (*manṭu* — frog); **7.** *Nuṇāvil:* frog pond (*nuṇal* — frog); **8.** *Kūvil:* flower pond (*kū* is a proto-dravidian word for flower. It is *pū* in Tamil; *hū* in Kannada. In Sri Lanka, *kū* stands for flower in the veddoid usage. **eg.** *kūmuṇa* is a Veddoid village in the Eastern Province which is known as *Pūmuṉai* by the Tamils of that province.

Apart from these suffixes, *Maṭu* and *Murippu* are prevalent in Vaṉṉi. *Maṭu* — a deep pond; *Murippu* — a bund or a break-water.

Place-names Connected to Vegetation

Atti, Aracu, Āl, Iluppai,
Vēmpu, Tāḻai, Mā, Marutu etc.:

eg. 1. *Attiyaṭi;* **2.** *Aracaṭi;* **3.** *Iluppayaṭi;* **4.** *Vēmpaṭi;* **5.** *Māvaṭi;* **6.** *Marutaṭi;* **7.** *Tāḻaiyaṭi* etc.

Uṭai:

Acacia. **eg. 1.** *Uṭuvil;* **2.** *Uṭutturai.*

Kārai:

A thorny plant. **eg. 1.** *Kāraitīvu;* **2.** *Kāraikkāl;* **3.** *Kāraikkāṭu.*

Cūrai:

Another thorny plant. **eg. 1.** *Cūravattai* (see *vattai*).

Parāy/Pirāy:

A tree. **eg. 1.** *Urumpirāy* (*urum* — large, impressive); **2.** *Kaṭṭaippirāi* (*kaṭṭai* — short).

Muḷḷi:

A thorny bush. **eg. 1.** *Muḷḷi:* **2.** *Muḷḷiyān;* **3.** *Muḷḷi vāykkal.*

Karampaṉ:

Arid grassland or *taravai* (*karampai nilam* in standard Tamil) **eg. 1.** *Karampaṉ* near *Vēlaṇai;* **2.** *Karaveṭṭi* (*veṭṭi* — *veṭṭai:* openland).

Karanṭāi:

A vegetation (*Karanṭai* in standard Tamil). **eg. 1.** *Karanṭāikkuḷam.* **2.** *Karanṭāi tū* (*tū* — scrub forest)

Pattai/Vattai:

Scrub forest. *Parrai* in standard Tamil. *Pa* and *Va* are interchangeable in South Asian languages. **eg. 1.** *Pirāṉpattai* (*pirāṉ* — any deity; *Pirāṉpattai* — the scrub forest where a deity dwells.); **2.** *Kottiyāvattai* (*Kotti* — *Koṟṟavai, Kāḷi,* who favours arid scrub forest as her dwelling. She is also known as *Kāṭukīḻaḷ* — one who owns forest lands. *Kottiyāvattai* — the scrub forest where *Kotti* dwells); **3.** *Cūravattai* (*cūrai* — a thorny shrub); **4.** *Vākaravattai* (*vakarai* — a plant); **5.** *Pattāvattai.*

Viḷāṉ:

Wood apple. **eg. 1.** *Periya viḷāṉ;* **2.** *Ciru viḷāṉ.*

Vēr:

Indigo, *Cāyavēr.* **eg. 1.** *Vērappiṭṭi;* **2.** *Vērakkāṭu;* **3.** *Vērattiṭal.*

Tū:

Tūr in standard Tamil means scrub or sticks and twigs of a bush. *Tū* in Jaffna Tamil stands for a scrub land, especially in the Vatamarātci region, from where people collect firewood as well as twigs for the *alampal* fences. (see *Vērappiṭṭi* site report). **eg. 1.** *Kapputū;* **2.** *Muṉṉatū;* **3.** *Karanṭāitū (Karantai* — a vegetation). In *Vaṭamarātcı,* an open scrub land is known as *Tū veli.*

Place-names connected to Cultivation

Kamam/Kāmam/Kam:

Cultivator's village. (*Grāma* — Skt.; *Gama* — Pkt. and Sinhalese; *Kirāmam* — Tamil) *Kamam* is paddy-field in Jaffna Tamil. The cultivator is known as *Kamakkāraṉ.* The adjoining village of a paddy-field stretch got the suffix *Kamam/Kāmam/Kam.* **Eg. 1.** *Koṭikāmam;* **2.** *Vīmaṉkāmam;* **3.** *Valikāmam* (*Vali* — sand; Pkt. or Veddoid. *Valikāmam* is an equivalent to the Tamil term *Maṇarri* or *Maṇaltiṭar* by which Jaffna was known). The suffix *kam* can also be taken as *ākam* (contain, inside etc.) **eg. 1.** *Cuṉṉākam* (limestone terrain); **2.** *Mallākam* (place of flowers); **3.** *Paṇṇākam* (musicians' place: *Pāṇ ākam).*

Pilam/Pulam/Pulavu:

Paddy-field, Open land. The Tamil term *pulavan* for a scholar derived from *pulam. Pulavaṉ* — one who has knowledge, wide as an open land. *Pilam/pulam* is a current usage in Jaffna indicating paddy-fields. **eg. 1.** *Maravaṉ pulavu;* **2.** *Kāṭṭuppulam.*

Vayal:

Paddy-field. **eg. 1.** *Kōyil vayal (lands donated to temple);* **2.** *Caṅkattār vayal* (lands donated to Buddha Sankam); **3.** *Kalvayal.*

Tōṭṭam:

Land for horticulture. **eg. 1.** *Maṇiyam tōṭṭam.*

Tōppu:

Grove. **eg. 1.** *Taccaṉ tōppu* (*Taccaṉ* — carpenter).

Vēli:

This is a term for the measurement of land, but also used to call a stretch of land. (1 *vēli* = 6.25 acres). **eg. 1.** *Nīrvēli.*

Place-names connected to Landscape

Iṭṭi/Tiṭṭi/Piṭṭi:

An elevated land. **eg. 1.** *Mayiliṭṭi;* **2.** *Pōyiṭṭi;* **3.** *Viḷiciṭṭi;* **4.** *Tampaciṭṭi;* **5.** *Kannātiṭṭi;* **6.** *Vērappiṭṭi* etc. *Iṭṭi* is mostly prevalent in the northern coastal areas. There is also a practice of calling the elevated lands in the names of the months. The reason for this is not known. **eg. 1.** *Taiyiṭṭi* (*Tai* — Jan/Feb.); **2.** *Māhiyappiṭṭi* or *Māciyappiṭṭi* (*Māga/Māci* — Feb/March); **3.** *Pankuṉippiṭṭi* (*Pankuṉi* — March/April).

Kaṇṭam/Kaṇṭal/Kaṇṭi:

Sector. *Kaṇṭam and Kaṇṭal* are mostly used in Vaṉṉi. **eg. 1.** *Kaṇṭa vāikkal;* **2.** *Maṇṇākaṇṭal* (sandy sector); **3.** *Vaṭṭakkaṇṭal* etc. In Jaffna, *Kaṇṭi* is the popular usage. **eg. 1.** *Paraya Kaṇṭi* (*Parayar's* quarter); **2.** *Valikaṇṭi* (sandy sector. The term *vali* is still prevalent in Sinhalese, denoting sand); **3.** *Polikaṇṭi* (paddy-field sector. *Poli* is an ancient Tamil word for paddy).

Tuṇṭam/Tuṇṭal/Tuṇṭi:

A sector or a piece of land. **eg. 1.** *Valittuṇṭal* (sandy sector); **2.** *Kāsittuṇṭi* etc.

Kalaṭṭi:

Open land with limestone outcrops. **eg. 1.** *Kollaṉ Kalaṭṭi* (*kollaṉ* — blacksmith); **2.** *Cātta kalaṭṭi* (*Cātta* — *Aiyaṉār*); **3.** *Kalaṭṭi Oluṅkai* etc.

Kaḷappu/Kiḷappu:

Open silt-land alongside a lagoon. (Root: *kaḷi* — silt; *Kaḷam* — open land). **eg. 1.** *Tanaṅkiḷappu* (an open silt stretch adjoining the Jaffna lagoon. *Tanaṉ* — a caste name). The term *Kaḷappu/Kiḷappu* is mostly prevalent in the Eastern Province, where a number of lagoons and back-waters are found.

Kuḻi:

A shallow land. **eg. 1.** *Nāvaṛkuḻi.*

Cempāṭu:

Red-soil land. **eg. 1.** *Cempāṭu* at *Urumpirāi;* The people from this area are known as *Cempāṭṭār.*

Taravai:

Marshland/Grassland. The areas are just known as *Taravai* and are found at many places in Jaffna.

Taṛai:

Open land. **eg. 1.** *Cippittaṛai* (*cippi* — oyster shells); **2.** *Kāttuttaṛai* (scrub forest).

Tāḻ/Tāḻvu:

Low-lying land. **eg. 1.** *Pāṇṭiyaṉ tāḻvu;* **2.** *Paṇṭittaḻ* (*panti* — Pāṇṭiyaṉ).

Tīvu:

Island. **eg. 1.** *Neṭuntīvu* (Island at a long distance off Jaffna).

Turutti:

Islet. This is an ancient Tamil word still in use in Malayalam and Jaffna Tamil. (Root: *turuttu* — project). **eg. 1.** *Turutippiṭṭi* between Kārainagar and Poṉṉālai; **2.** *Naṭutturutti* at Puṅkuṭutīvu.

Veṭṭai/Veṭṭi:

Open land. **eg. 1.** *Aḷaveṭṭi;* **2.** *Paṇāveṭṭi* (*Pāṇan* — a tribe of musicians); **3.** *Karaveṭṭi* (*Kara/Kārai* — a thorny plant).

Veḷi:

Open land. **eg. 1.** *Vallai veḷi* (*vallai* — a plant).

Miscellaneous:

Āy:

? Probably an archaic form of *Āyam* (lands paying tax). **eg. 1.** *Mūḷāy* (three *Āya* lands); **2.** *Kalluṇṭāi* (stoney *Āya* land); **3.** *Tiriyāy* (three *Āya* lands).

Appendix VI
Religion in Jaffna

Plate 181: *Syncretism of Brahmanic and folk traditions. The Brahmin priest performs 'Maṭai', a folk ceremony, while the drummers beat at Maṭattukkarai Kaṇṇakai Ammaṉ temple, Kārainagar.*



We prefer a term proto-Hinduism to describe the religious phenomenon that was prevalent in South Asia in the pre and protohistoric times. The prehistoric animistic and folk religious practices were seen for the first time refined into a distinct pattern during the times of the Indus civilisation. This had set the broad outlines for further developments in Hinduism in entire South Asia in the times to come. In South Asia, it was the Megalithic culture that had set the scene for such a polarisation of religious ideas that can be described as the southern development of proto-Hinduism. This is testified by the archaeological evidences as well as by the references in the cankam Tamil literature.[1]

Before the advent of Buddhism, the religion in Sri Lanka — both among the Veddoid and Megalithic strata — was belonging to this pattern of proto-Hinduism.[2] Naturally, the earliest form of religion in Jaffna was also of this milieu, the remnants of which can still be found in the folk religion in Jaffna.

The very idea of a Megalithic burial along with food and other offerings itself was a religious practice. Cremation later replaced burial; but, even today the Jaffna folk serve various dishes to the deceased on a certain day after the death. Some, even serve them in the crematorium. It is interesting to note that till recently the lower castes in Jaffna were burying their dead. In the recent decades, the right to cremation became a question of prestige, and they started cremating the dead.

The trisūla symbol, the most popular form of folk religion in Jaffna, is another remnant of proto-Hinduism (See appendix II for its meaning and phonetic value in the early times). This is an evidence that illustrates how a particular symbol of religious affinities that was seen since the times of Indus civilisation, diffused to a pocket in the southern tip of South Asia. In Jaffna, an array of folk deities, both male and female deities, is seen being worshipped in the form of trisula.

To name some of the folk deities in Jaffna: *Periyatampirāṉ, Nākatampirāṉ, Kāḷakanṭaṉ, Korrikiḻavaṉ, Pūtavarāyar, Muṉi, Māṭaṉ, Aṇṇamār, Cēvukar, Viṟumar, Iṭumpaṉ, Valliyakkaṉ, Aiyaṉār, Kāttavarāyar,* different forms of *Vayiravar* (*Caṭai Vayiravar, Caṉṉāci Vayiravar, Mayinti Vayiravar, Gnāṉa Vayiravar* etc.); *Kotti, Kāḷi, Nīli, Vālai, Pēycci, Pētti, Āḻvāttai, Māri, Kaṇṇaki, Nāccimar, Ūttaikuṭiyaṉ* etc. A complete survey of these deities has yet to be undertaken.

Many of these deities are survivals of very early forms of religion. For instance, *Valliyakkaṉ* (*Val-Iyakkaṉ*; mighty *Yaksha*) worshipped by the *Parayar* in Jaffna is a survival of the *Yaksha* cult that was prevalent throughout South Asia. *Muṉi* and *Māṭaṉ* also belong to this category.

Periyatampirāṉ Nākatampirāṉ, Kāḷakanṭaṉ, Pūtavarāyār and *Korrikiḻavaṉ* are proto forms of Siva. *Korrikiḻavaṉ* is an ancient Tamil usage to denote Siva. (*Korri* — *Korravai*; the mother Goddess. *Kiḻavaṉ* — husband). *Pūtavarayar* is a reminiscent of *Pūta* worship found in the *Caṅkam* literature as well as the *Pūtanāta* concept of Siva.[3]

Kotti/Korri, Kāḷi, Nīli, Vālai, Māri are all early forms of the mother Goddesses which were syncretised with the concept of *Pārvati*, Siva's consort.

Viṟumar or *Viṟuma Vayiravar* is a folk form of Brahma (Brahma — *Piṟumar* — *Viṟumar*).

Aṇṇamār, Cēvukar, Kāttavarāyar, Nāccimār, and *Kaṇṇaki* (see plate 183) belong to the ancester hero/heroine cult seen in the early literature, inscriptions, and in the *Vīrakkal* and *satikkal* traditions.

The *Aiyaṉār* cult is an interesting example. *Aiyaṉār*, an early folk deity, who is the guardian God of the villages was first syncretised with Buddha; later associated with Siva and Vishnu as *Hariharaputra;* and nowadays seen being syncretised with the *Aiyappaṉ* cult of Kerala. This latest development is yet to reach Jaffna.

Buddhism which emerged as an institutionalised religious ideology, overlapped with proto-Hinduism in Jaffna, in a similar way it happened elsewhere in South Asia. In those days, Buddhism was patronised by the elite and the ruling sections. For several centuries, Jaffna was under the spell of Buddhism. (See the conclusions for the distinct aspects of Jaffna Buddhism). In Jaffna, the evidences for Buddhism are mainly found in the port settlements and in the central places indicating that the ideology was patronised by the elite of the society.

With the advent of Tamil *Bhakti* movement, Buddhism and Jainism declined in south India in the Pallava times. Influenced by Brahminism or classical Hinduism, the religious revival in south India was now in the form of Tamil Saivaism and Vaishṇavism,

which had incorporated the already existing Dravidian elements of religion. This south Indian religious revival against Buddhism and Jainism could not bring Sri Lanka completely into its orbit. Though the influences of this wave was felt to a certain extent in the entire island, Buddhism safe-guarded its niche in the southern parts of the Island.

If not in the Pallava times, at least in the Cōḻa period, Jaffna along with the northern and eastern parts of the Island, was brought under the influence of the classical Tamil Saivaism. Especially, the Saiva Siddhanta sect of Saivaism was adopted as the elite form of religious ideology, as it was suitable for the non-Brahmin, *Veḷḷāḷa* dominated society in Jaffna.

Islam was not a significant influence in the Jaffna peninsula. But, the Portuguese rule has seen the destruction of almost all the big Saiva temples and a sizeable population, particularly the coastal folk, was converted to Catholic Christianity. In this process, some of the shrines of Mother Goddesses became the churches of Our Lady. The Reformed Dutch Church (Dutch Protestants) could not make much impact with the local population despite the construction of a number of churches. All of them, except two, were abandoned after the Dutch rule. [4] But, the Church of South India (American Mission) was successful in converting even the upper strata of the society.

The Saiva revival in Jaffna which commenced as early as in the late Dutch times, culminated through the efforts of Ārumuga Nāvalar (1822-1879) who is known as the champion of Hindu reformation in Jaffna. Among the native revival movements, the Jaffna movement preceded all the other movements in Sri Lanka. The zeal of Tamil-Saiva revival in Jaffna in late Dutch and early British times, not only influenced the rest of the Tamil homeland in Sri Lanka, but also provided inspirations to Tamil Nadu.

As a result of the Saiva revival, many of the old temples destroyed in the Portuguese times were reconstructed. These reconstructions still retain some indigenous architectural traditions that are comparable with the Kerala and Sinhala temple architecture. Another aspect of the revival is the sanskritisation of the folk deities. *Kaṇṇakai, Kotti, Vālai, Nīli, Pēycci, Nāccimār* etc. have nowadays become *Bhuvanēsvary, Rajarajēsvary* etc. Likewise, the male folk deities have become *Gnana vayiravar.*

Plates 182, 183: *Bunches of banana (182) and food cooked in the temple premises (183) are being offered to Kaṇṇakai in a ceremony known as 'Matai' at the Maṭattukkarai Kaṇṇakai Ammaṉ temple at Kārainagar.*

Kaṇṇakai (Kaṇṇaki) is an ancestor-heroine deity, worshipped both by the Tamils and Sinhalese in Sri Lanka. She is known as Pattini in the Sinhalese legends. The Tamil epic Cilappatikāram written in the early centuries of the Christian era narrates the story of her life. She was born in the Cōḻa country; fought for justice in the Paṇḍyaṉ country; and attained heaven in the Cera country. The epic tells that Gajabāhu, a Sri Lankan king of that time also worshipped her and brought in the Kaṇṇaki cult to Sri Lanka. Thus, the legend of Kaṇṇakai became a common religious cult in Tamil Nadu, Kerala and Sri Lanka. In Kerala she is known as Bagavati. In Jaffna, almost all the Kaṇṇakai shrines are found in the coastal areas facing the sea or lagoon. She is a favourite deity and supposed to be the guardian to the fisher folk and sea-traders, since she was a daughter of a rich sea-trader of Kāvērippaṭṭiṉam.

Some of the Kaṇṇakai shrines became the churches of Our Lady, as the coastal folk were converted to Christianity by the Portuguese. The remaining shrines are fastly becoming Brahmanised, adopting names like Rājarajēsvary, Bhuvanēsvary etc. Formerly, these shrines were without images, the deity being represented by an anklet (cilampu) wooden slab, stone or a trident. In 19th century, Āṛumuga Navālar was a severe critic of the Kaṇṇakai cult, saying that it is non-agamic and branded her as a Jaina merchantess (Camaṇa camaya ceṭṭicci). But, the popular faith survived. In Jaffna it withstood the forces of Buddhicisation, Christianisation and Brahminisation.





Notes

Chapter One

1. A Brahmi legend on a Potsherd from Kantarōṭai, and the Āṉaikkōṭai bronze seal found in the Megalithic burial.

   Indrapala, K., "A Brahmi Potsherd Inscription from Kantarōdai", *Purvakala*, Bulletin of the Jaffna Archaeological Society 1973; "Is It An Indus-Brahmi Epigraph?", *The Hindu*, Sunday, April 26, 1981.

2. The Vallipuram Gold Plate, A Carnelian Seal from Kantarotai and a Potsherd with two letters stamped on it from Ānaikkōttai.

   Veluppillai, A., "Tamil in Ancient Jaffna and Vallipuram Gold Plate", *Journal of Tamil Studies*, 1981.

   Indrapala, K., *Tamil Inscriptions of the Jaffna District*, Cintanai Publications, Peradaniya 1969. Also see Plate 73.

3. *Kailāyamālai*, ed. Natarajan, P., Cettiyar Press, Jaffna 1983; *Vaiyāpāṭal*, ed. Nadarajah, K.S., Colombo Tamil Sankam, 1980; *Yāḻpāṇavaipavamālai*, ed. Sabanathan, Kula., Saraswathy Book Depot, Colombo, 1953.

4. *Kailāyamālai*, V: 4 — V: 44; *Vaiyapatal*, V: 12 — V: 17; *Yālpānavaipavamālai*, pp. 13-24.

5. *The Dīpavamsa*, ed. Bimala Churn Law, The Ceylon Historical Journal Vol. VII Nos. 1-4, 1959, Chapter 9, V: 13.

   The Mahāvamsa, ed. Wilhelm Geiger, Ceylon Government Information Department, Colombo, 1960. Ch: I, V: 54; Ch: XX, V: 25; Ch: XI, V: 23, 38; Ch: XVII; V: 7; Ch: XI; V: 23, 25, 60; Ch: XX, V: 25.

6. Vimala Begley, "Proto-Historic Material from Sri Lanka (Ceylon) and Indian Contacts", *Ecological Backgrounds of South Asian Pre-history* ed. Kenneth A.R. Kennedy and Gregory L. Possehl. South Asian Occasional papers and Thesis, South Asia Program, Cornell University 1973, pp. 193-194.

7. See the map on the ecological zones of Sri Lanka prepared by Dennis Fernando. *P.E.P. Deraniyagala Commemoration Volume*, 1980. Also see Appendix I.

8. See Appendix III, the C_{14} dates for Kantorōṭai.

9. Pathmanathan, S., *The Kingdom of Jaffna*, Colombo, 1978, P.4.

Chapter Two

1. Gururaja Rao, B.K., *The Megalithic Culture in South India*, University of Mysore, 1972, pp. 258-261; Vimala Sahney, "Appendix A, The Black and Red Ware", *The Iron Age of South India*, unpublished Ph.D. thesis, University of Pennsylvania, 1965, pp. 172-175 and Plate I, p. 180; Soundara Rajan, K.V., "Megaliths and Black and Red Ware", *Seminar Papers on the Problems of Megaliths in India*, Varanasi, 1969, pp. 69-89.

2. *ibid.*

3. See plate 106, p. 121.

4. See footnote 1.

5. Deraniyagala, S.U., "Archaeological explorations in Ceylon part 2: Kollan Kanatta, Vilpattu", *Ancient Ceylon, No.: 2*, December 1972, pp. 1-18.

5. Deraniyagala, S.U., "Archaeological explorations in Ceylon part 2: Kollan Kanatta, Vilpattu", *Ancient Ceylon, No.: 2*, December 1972, pp. 1-18; "The Citadel of Anuradhapura 1969: Excavation in the Gedige Area", *Ancient Ceylon, No.: 2*, December 1972, pp. 48-169; Vimala Begley, "Excavations at Pomparippu 1970", *Ancient Ceylon, No.: 4*, May 1981, pp. 84-93; "Proto-historic Material...", *op. cit.*; Sitrampalam, S.K., *The Megalithic Culture in Sri Lanka*, unpublished Ph.D. thesis, Deccan College, Poona, 1980.

6. See pp. 74-78; 115-126.

77. See Appendix II.

8. See the description on pottery type 4 (chapter 2: p. 10) and the description on the burial Sk_1, Ānaikkōṭṭai, pp. 115-126.

9. Vimala Begley, "Protohistoric Material...", *op. cit.*

10. Wheeler, R.E.M., "Arikamedu: an Indo-Roman Trading Station on the East Coast of India", *Ancient India, No.: 2*, 1946, pp. 17-124.

11. See plate 173.

12. See p. 14.

13. John Carswell, "China and Islam, A Survey of the Coast of India and Ceylon", *Transactions of the Oriental Ceramic Society, Vol. 42*, 1977-1978.

14. See pp. 101-103.

Chapter Three

1. The name of the island, Netuntīvu originated as it is the farthest island off Jaffna. (*Netu — long distance*).

2. A large number of these freshwater snail shells with perforations to extract the substance was seen in the microlithic cave site at Kuruvita, excavated by S.U. Deraniyagala in 1981.

3. *Mahāvamsa*, XXIV: 25; XXV: 104; XXXII: 52, 55.

4. See pp. 29-31.

5. Prasasti of Rajādhirāja II (1163-1179 A.D.); "Nayinātīvu Inscription of Parākramabāhu, ed. Indrapala, K., *Tamil Inscriptions of the Jaffna District*, 1969. (In Tamil).

6. Peiris, P.E., *The Kingdom of Jafnapatam 1645*, The Ceylon Daily News Printers, 1920, p. 4.

7. *ibid.*

8. See pp. 29-31.

9. John Carswell, "China and Islam, A Survey of the Coast of India and Ceylon" *Transactions of the Oriental Ceramic Society*, Vol. 42, 1977-1978.

10. Peiris, P.E., *op. cit.*

11. See pp. 156-162.

12. Ragupathy P., *Mantai-Punakary Exploration*, A report submitted to the Dept. of Archaeology, 1982. (Unpublished).

13. See pp. 46-47.

14. See pp. 127-132.

15. See pp. 49-53.

16. The pedigree Annals of the Viyavil Temple Priests. *Ānma Tarcanam*, Siva Sri Kanapatīsvarak Kurukkal Memorial Volume, Sivan Temple, Kārainagar, 1967.

17. See pp. 43-44; 127-132.

18. *Akitta Jātaka.* It refers that a hermit called *Akitti*, who was a native of Kāsi (Benaras), came to Kāvērippaṭṭinam and from there went to *Kāradīpa* where he did penance under a *kārai* tree (*Kārai* — a thorny plant).

Raghavaiyangar, M., *Research Papers* (In Tamil), Tamil University, Tanjavur, 1984. pp. 222-223.

19. The Viyāvil Aiyaṉār temple is near the Vērappiṭṭi site. The Pedigree Annals of the Viyāvil Temple Priests (*op. cit.*), mention that the temple was consecrated in 1596 A.D. Also see Appendix VI.

20. *Paṟālai Viṉāyakar Paḷḷu* (by Cinnattampip Pulavar) ed. Jampulinkam Pillai, S.V., Vidyanupalana Press, Third Edition, 1956.

21. *Mahāvamsa*, XIX : 23, 60; XX : 25.

22. *Parālai Viṉāyakar Paḷḷu*, *op. cit.*, Introduction.

23. Rasanayagam. C., *Ancient Jaffna*, 1926, p. 190.

24. According to the legend, a Cōḻa princess called Mārutappuravalli, came to Jaffna to get rid of a curse, by taking bath at the auspicious Kīrimalai springs. She then married the king of Katiramalai and constructed the Māviṭṭapuram Kantaswāmy Temple. Her story invariably finds reference in all the historiographical literature on Jaffna.

See, *Kailāyamālai*, V : 4-17; *Vaiyāpāṭal*, V : 15-17; *Yāḻppāṇavaipavamālai*, pp. 15-22.

25. Pieris, P.E., *op. cit.*, p. 16.

26. Pieris, P.E., "Nagadipa and Buddhist Remains in Jaffna part 1" *J.R.A.S., (Ceylon Branch), 1922*, pp. 11-30; "Nagadipa and Buddhist Remains in Jaffna part 2", *J.R.A.S., (Ceylon Branch), 1925*, pp. 40-67.

27. Vimala Begley, "Proto-Historic Material...." *op. cit.*, p. 193.

28. *ibid.*, p. 194.

29. See Appendix III.

30. See p. 141.

31. The statistics are available at the Water Resources Board, Jaffna.

32. See pp. 49-53.

33. See p. 64 and p. 70.

34. See p. 169 and pp. 181-182.

35. See Plate 161 and p. 182.

36. Vimala Begley, "Excavations at Pomparippu", *op. cit.*, p. 81.

37. The lower and upper dates for the mound are arrived at by palaeographical evidences. This is a tentative dating and there is a probability of finding still earlier burials in this mound.

The metal seal found in burial Sk_1 is assigned to 3rd-2nd century B.C. and a potsherd found in the disturbed surface, with two Brahmi letters in assigned to 2nd-3rd century A.D.

38. *The Eelanadu*, Jaffna, Sunday, 1.11.1981, p. 6.

39. Indrapala, K., "Vallipuratilē Kiṭaitta, Tāḻikaḷ" (The Urns from Vallipuram), *Virakesari, Illustrated Weekly* 4th June 1972.

Theyarajan, A., "Vallipurat Tāḻikkāṭu" (Vellipuram Urn burial site) *Virakesari, Illustrated Weekly*, 18th February 1973.

40. See pp. 156-162.

41. Veluppillai, A., "Tamil in Ancient Jaffna and ..." *op. cit.*

42. See pp. 156-162.

43. *ibid.*

44. *Vaṉṉi Nāccimār Māṉmiyam* (A Tamil folk poem on the glory of the Vanni chieftains' Wives) ed. Shanmugasundaram, T., Arul Publications, Maviddapuram, 1981; *Iṛankaṇiyavaḷai Kurunātar Māṉmiyam* (Folk poem on the glory of God Kurunātar of

Irankaṉiyavaḷai near Kankesanturai), ed. Shanmugasundaram, T., Arul Publications, 1980.

45. See pp. 156-162.

46. *Vaiyāpāṭal*, V : 77.

47. "*Kāntaḷūr Cālai Kalamaṛuttaruḷi*" (Destroyed the Navy at the Kāntaḷur Cālai Port) — The prasasti portion of the inscriptions of Raja Raja I.

48. Kanecaiyar, Ci., *Īḻattut Tamiḻppulavar Caritam* (A History of Ceylon Tamil Poets), pp. 31-35.

49. Queyroz, *op. cit.*, p. 363.

50. Gnanapirakasar, S., Rev., "Some Ruins in Jaffna", *The Ceylon Antiquary and Literary Registrar*, Vol. VII, Part II, October 1921, pp. 118-121.

51. Queyroz, *op. cit.*, Book 2, ch. 29, p. 362.

52. Based on the descriptions found in *Kalvaḷai Antāti*, Mr. Swaminathan of Kalvaḷai, Canṭilipāi, has attributed this literature to Kalvalai Fort, Mantuvil. He was also involved in the renovation of the Kalvalai Fort Pillaiyar temple.

53. See p. 109.

54. Gnanapirakasar, S., Rev., *op. cit.*

55. See p. 156.

56. Gnanapirakasar, S., Rev., *op. cit.*

57. *ibid.*

58. *Cekarācacēkaramālai* (An Astrological work of the times of Cekarācacēkaran, king of Jaffna), ed. Irakunataiyar, I.C., Kokkuvil, 1942, V : 8.

59. See pp. 63-78.

60. *ibid.*

61. See plate 99.

62. See plate 107.

63. See Appendix III.

64. For a detailed bibliography, see Ramachandran, K.S.; *A Bibliography on Indian Megaliths*, State Department of Archaeology, Government of Tamilnadu, 1973; also see the bibliography.

65. Sitrampalam, S.K., *The Megalithic Culture in Sri Lanka*, unpublished Ph.D thesis, University of Poona, 1980; Susantha Goonatilake, "The Formation of Sri Lankan Culture", *Ancient Ceylon*, No.: 4, May, 1981.

66. See Appendix II.

67. See Conclusions.

68. *ibid.*

69. The palaeography of the Āṉaikkōṭṭai seal and the palaeography of the stamped leters on a Rouletted Ware potsherd.

70. See Appendix III.

71. See Chapters 4 and 5.

72. See pp. 43-44.

73. An epidemic out-break with a vast number of casualties in Kārainagar Island during the times of the Portuguese and Dutch is found recorded in the pedigree annals of the Viyāvil temple priests. *Ānma Taricanam*, Siva Sri Kanapatīsvarak Kurukkal Memorial Volume, pp. 14-17.

74. See p. 124.

75. See pp. 115-126.

76. See Chapters 4 and 5.

Chapter Four

1. See Appendix I.

2. Compare plates 123 and 125.

3. See Appendix I.

4. The names of some of the villages of the red-soil area find reference only in the later historiographical works like *Kailāyamālai, Vaiyāpāṭal, Yāḻppāṇavaipavamālai, Taṉṭikai Kaṉakarāyaṉ Paḷḷu* and in the Portuguese records, *viz*. Peiris, P.E., *The Kingdom of Jafnapatam, op. cit.*, p. 47. Also see plates 162 to 167.

5. See pp. 163-167.

6. See plate 124.

7. See Appendix I.

8. Almost all the place-names for the villages adjoining the Valukkiyāru flood-outlet are connected with water resources. e.g. *Kattuvan, Alavetti, Kantarōtai, Kattutai, Navāli, Kalaiyōtai*, etc. The term *Valākkai* itself is a derivative of an ancient Tamil *Valā*, which denotes a water resource (Tirukkural V : 523 — Personal communication with late T. Shanmugasundaram of Māvittapuram, Tellippalai.

9. See plate 62.

10. See pp. 49-53.

11. See Appendix I.

12. The *vil*-bund could be attributed to the Megalithic folk, since they were the first people who introduced tank-irrigation in these regions.

Also see Gururaja Rao, B.K., "The Iron Age in Karnataka", "*Archaeology of Karnataka*, University of Mysore, 1978, pp. 56-57.; Susantha Goonatilake, "The Formation of Sri Lankan Culture", *Ancient Ceylon, No.: 4,* May 1981, pp. 158-159.

13. *Kailāyamālai*, V : 7 ; *Vaiyāpātal*, V : 16 ; *Yālppāṇavaipavamālai*, p. 7.

14. See pages 60, 115 and 129.

15. See pages 124, 125 and 129.

16. See chapter 3.8 and 3.9.

17. The Pedigree Annals of Viyāvil (Karainagar) begin with the arrival of the Brahmin priests from Uttarakōcamankai (Pāndyan country) during the last phase of the kingdom of Jaffna. These records narrate the route from Rāmēsvaram to Kayts in which Kaccaitivu and the Periyaturai of Delft were touched by the vessels.

"The Pedigree of Kanapatisvara Kurukkal" *Ānma Tarcanam* (In Tamil), Siva Sri ca. Kanapatīsvarak Kurukkal Memorial Volume, Sivan Temple, Karainagar, 1967, pp. 1-25.

18. See chapter 3.3, 3.4 and 3.6.

19. John Carswell and Martha Prickett, "Mantai 1980 : A Preliminary Investigation ", *Ancient Ceylon*, Vol. 5, 1984.

20. It is a well known fact that even small *Kattumarams* (catamarans) with an out-motor (nowadays fibre-glass boats) are used for this purpose. The passage is so narrow, that it is said, a boat can cross the strait within two hours, if the wind is favourable.

21. See chapter 3.8 and 3.9.

22. Indrapala, K., "Nayinativu Inscription", *Tamil Inscriptions of the Jaffna District*, Cintanai Publications, Peradeniya, 1969.

23. *Yālppāṇavaipavamālai*, p. 89; Peiris, P.E., *The Kingdom of Jafnapatam, op. cit.*, p. 4.

24. There are two forts — Fort Eyrie and Fort Hammenhiel — and one early archaeological site (Vērappiṭṭi) at the entrance of this pass.

25. Queyroz mentions of a kinglet of Karaiyār (coastal folk) who had a stronghold near Vaṇṇārpaṇṇai. Obviously this was Nāvāitturai. Queyroz, *op. cit.*, book 4, ch. 2, pp. 631-633.

26. Peiris, P.E., *The Kingdom of Jafnapatam 1645*, p. 14. Also see chapter 3.5 and 3.6.

27. *Cekarācacēkaramālai, op. cit.*, V : 8.

28. *Yālppāṇavaipavamālai*, p. 14.

29. Ragupathy, P., "Ārukāl Maṭam : A Resthouse for the Caravan Traders", (In Tamil) *Kalāvathy*, Palaly Teachers' Training College, 1980, p. 17.

30. Raising an *Āvurañcikkal* near cross-roads and *Maṭams* seems to be an ancient practice of the Tamils. *Tirumurukāṟṟuppaṭai* (a cankam idyll) refers to this cattle rubbing stone along with cross-roads and *Maṭams*, and mentions that these features are dwellings of God Murukaṉ.

Tirumurukāṟṟuppaṭai, with the commentary of Nacciṉārkkiṉiyar, ed. Cāminataiyar, U.V., 6th edition 1961, V : 225-226. Also see Nacciṉārkkiṉiyar's commentary.

31. See pp. 159-162.

32. However, we were told that the *Sandesa* poems in Sinhala, especially *Kōkila Sandēsa*, give an idea of the coastal route from Kotte to Jaffna.

33. Peiris, P.E., *op. cit.*, pp. 14-15.

34. *ibid.*

35. *ibid.*

36. Pūnakari : It was also known as *Pooneryn* in the British records.

37. Eḻutumattuvāḷ — a place name in Paccilaippaḷḷi between Koṭikāmam and Paḻai.

38. *Kamam* — A Jaffna Tamil word denoting paddy-fields.

39. Fort Bul aad Fort Bechutter.

40. Peiris, P.E., *op. cit.*, p. 19.

41. See chapter 3.5.

42. See chapter 3.6.

43. Ragupathy, P., *Mantai — Punakari Exploration, op. cit.*

43. Ragupathy, P., *Mantai — Punakari Exploration, op. cit.*

44. *Vaṉṉināccimar Māṉmiyam* and *Iṟankaṇiyavaḷai Kurunātar Māṉmiyam, op. cit.*

45. See pp. 83-100.

46. Our field guide in Paccilaippalli Mr. G.N. Subramaniyam of Kōyilvayal, Iyakkacci, told us of several such spots with pottery distribution. We could not inspect them during our field work programme, due to stagnant rainwater in those areas.

47. Queyroz, *op. cit.*, book 2, ch. 29, p. 362.

48. See Āṉaikkōṭṭai and Kārainagar excavation reports, pp. 115-132.

49. *ibid.*

50. See p. 144.

51. Peiris, P.E., *op. cit.*, p. 16.

52. See chapter 3. 11.

53. Peiris, P.E., *op. cit.*, pp. 47-52.

ch. 3.11.

Chapter Five

1. Deraniyagala, S.U., "Prehistoric Ceylon — A Summary in 1968", *Ancient Ceylon, No. : 1*, Journal of the Archaeological Survey of Ceylon, January 1971, pp. 3-47; "Prehistoric Research in Sri Lanka 1885-1980", *P.E.P. Deraniyagala Commemoration Volume*, 1980, pp. 152-207; "Was There a Palaeolithic (Old Stone Age) in Lanka", *Ancient Ceylon, No. 4*, Journal of the Archaeological Survey of Sri Lanka, May 1981, pp. 143-156; "Sri Lanka 28000 B.C.", *Ancient Ceylon, No. 5*, Journal of the Archaeological Survey of Sri Lanka, 1984.

   Zeuner, F.E., and Allchin, B., "The Microlithic Sites of Tinnavely District, Madras State", *Ancient India, No. 12*, Bulletin of the Archaeological Survey of India, 1956, pp. 4-20.

2. *ibid* and personal communication with S.U. Deraniyagala in August 1984.

3. Ragupathy, P., *Mantai-Punakari Exploration Report, op. cit.*

4. See p. 40.

5. Gururaja Rao, B.K., 1972; Sundara, A., 1975; Subba Rao, B., 1962; Narasimhaiah, B., 1980; Ramanna, H.S., 1983; Ramachandran, K.S, 1973; Haimendorf, C. Von F., 1953. See the bibliography for details.

6. Parpola, Asko., *Arguments for an Aryan Origin of the South Indian Megaliths*, State Department of Archaeology, Government of Tamilnadu, 1973.

7. "The C_{14} dates from the South (South India) with Black and Red Ware association are few only. From Dharanikota (A.P.) we have a C. 300 B.C., from Korkai (Tamilnadu) c. 800 B.C. (though the association is not clear) and out of the scattered C_{14} dates from Paiyampalli (Tamilnadu) we have two meaningful dates from 'Megalithic levels' giving a range of c. 600-200 B.C. The only date definitely associated with a Megalithic is from Halingalli in Karnataka *viz.* 80 ± 100 B.C. But now Hallur has given two very early C_{14} dates : 955 ± 100, 1045 ± 105 from the Neolithic — Iron Age overlap phase".

   Agrawal, D.P., "Karnataka Archaeology : A Chronology Reapprisal", *Archaeology of Karnataka*, ed. Narasimhamurthy, A.V., University of Mysore, 1978, pp. 134-135 and p. 142.

8. In addition to the authors mentioned in footnote 5, Srinivasan, K.R., "The Megalithic Burial and Urn fields of South India in the light of Tamil Literature and Tradition, *Ancient India*, Vol. 2, pp. 9-16; "Some Aspects of Religion as Revealed by Early monuments and Literature of the South" *Journal of Madras University*, Vol. 32, No. : 1, 1960, pp. 131-198.

9. Sitrampalam, S.K., *The Megalithic Culture in Sri Lanka*, (Unpublished Ph.D. thesis), Deccan College, 1980; Susantha Goonatilake, "The Formation of Sri Lankan Culture", *Ancient Ceylon*, No. : 4, 1981.

10. Vimala, Begley, "Excavations at Pomparippu 1970", *Ancient Ceylon, No. : 4*, 1981, pp. 84-93.

11. Deraniyagala, S.U., "The Citadel of Anuradhapura 1968 : Excavations in the Gedige Area", *Ancient Ceylon, No. : 2*, 1972.

12. Thousands of Brahmi inscriptions, so far found in Sri Lanka are compiled into two volumes by late S. Paranavitana. But, he interpreted the clan-names appearing in them in order to attribute an Aryan origin. In recent times, these Brahmi inscriptions are re-read and re-interpreted by scholars like S. Karunaratne, K. Indrapala, A. Thevarajan, S.K. Sitrampalam and A. Veluppillai. These recent studies clearly point out a close affinity between Sri Lanka and South India as far as the clan names are concerned. e.g. *Parumakaḷ/Parumakaḷu (Perumakaṉ/Perumakaḷ); Āy; Vēḷ; Uti (Utiyaṉ); Abi (Abbe* — Old Kannada); *Cūḍa/Cūḷa (Cōḷa); Tissa (Ticaiyaṉ); Gamaṇi (Kirāmaṇi), Nāka* etc.

13. Microlithic and early historic sites are found side by side at many places. At Mantai, a microlithic layer has been found beneath early historic levels, but, no sign of a Megalithic layer. (Mantai 1982 excavations by John Carswell). However, a clear stratigraphy of microlithic overlapping with historic period is yet to be recorded.

14. Vimala Begley, 1973. *op. cit.*

15. *ibid.*

16. See appendix III.

17. Indrapala, K., 1973, *op. cit.* Also see appendix II.

18. See appendix II.

19. See footnote 7.

20. Early literatures in Tamil and Pali refer Jaffna as a country of the Nākas.

21. See appendix V and VI.

22. *Kailāyamālai*, V : 10-15; *Vaiyāpāṭal*, V : 17; *Yālppāṇavaipavamālai*, p. 13.

23. Wheeler, R.E.M., "Arikamedu, an Indo-Roman Trading Station on the East Coast of India", *Ancient India, No. : 2*, 1946, pp. 17-124.

24. The development of trade and the urbanisation are probably marked by the abundant presence of Rouletted Ware at Kantarotai.

25. *Cilappatikāram*, Ch. 1, Invocation, V : 21-22.

26. *Manimēkalai*, Ch. 10, V : 57. Also see Raghavaiyangar, M., *Research Papers* (In Tamil), Tamil University, Tanjavur, 1984. pp. 222-223.

27. Veluppillai, A., 1981, *op. cit.*

28. *Vaiyāpātal*, V : 4.

29. Indrapala, K., "An Inscription of the Tenth Year of Cola Lankes-

vara Dēva from Kantalāi, Sri Lanka", *Senarat Paranavitana Commemoration Volume*, Leiden, 1978, pp. 81-97.

30. *Kailāyamālai*, V: 4-17; *Vaiyāpātal*, V: 15-17; *Yālppānavaipava-mālai*, pp. 13-22.

31. Indrapala, K., "Fort Hammenhiel Inscription", "A Cola Inscription from the Jaffna Fort", *Epigraphia Tamiliça*, Jaffna Archaeological Society, 1971.

32. In Tamil, Cāttan and Aiyan are synonyms for both Buddha and Aiyanār. In Jaffna, Aiyanār temples are found at many of the ruined Buddhist sites. This syncretism is still followed. At Pālavikkulam near Pūnakari, we have noticed a broken image of Buddha being worshipped as Aiyanār by the local folk. See also appendix VI.

33. John Carswell, *China and Islam... op. cit.*

34. Indrapala, K., 1971, *op. cit.*

35. The founders of the Kingdom of Jafna are said to be the feudatories of the second Pandyan empire.

36. Pathmanathan, S., *The Kingdom of Jaffna*, Colombo, 1978; Indrapala, K., *Yālppāna Irācciyattin Tōrramum Valarcciyum* (In Tamil); 1972.

Appendix I

1. Cooray, P.G., *An Introduction to the Geology of Ceylon*, p. 135.
2. Wayland, E.J. and Davis, A.M., *The Miocene of Ceylon*, *Quart. Journal, Ecological Society*. *LXXXIX*, Part 4, 577-602, 1923.
3. The log of the well is reproduced here with the courtesy of the Irrigation Department, Sri Lanka.
4. Jayasingham, W.L., Urban Geography of Jaffna Town, Clark University Ph.D. Thesis, 1951.
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6. Thambaiyah Pillai, G., 'Climatic Controls in Ceylon', *University of Ceylon Review*, Vol.XI No. 3 and 4.
7. Crowe, P.R., 'Wind and Weather in Equitorial Zone' *Trans. Inst. Brit. Geogs.*, 1951.
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15. Arumugam, S., 'Development of Ground Water and its Exploitation in the Jaffna Peninsula' *The Institution of Engineers*, Ceylon Transactions for 1970, Vol.I, p.41.
16. Farmer, B.H., 'Some Thoughts on the Dry Zone' *Ceylon Geographical Society Bulletin*, Vol.VI, Nos. 2 and 3, pp.3-7. Farmer in order to arrive at the p/E ratio, used the Formula : $E = K (0.03 sd)/ + W/10$ where E means free water evaporation in inches; sd means monthly saturation deficit in inches; K is 20 and W is average wind velocity in miles per hour for the month in question.

    p/E greater than 2 is considered effective rainfall.
17. Source : Dept. of Information, *Background Briefing* of 13.11.69.
18. Kularatnam, K., *Geology and Water in the North'*, (1964).

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1. Indrapala, K., "Is It An Indus-Brahmi Epigraph?", *The Hindu*, Sunday, April 26, 1981.
2. Ragupathy, P., "Indus Brahmi Seal", Letters to the Editor, *The Hindu*, 9th July, 1981.
3. Ramesh, K.V., *Key Note Address Delivered in Seminar A.5 of the 31st International Congress of Human Sciences in Asia and North Africa Held at Tokyo and Kyoto, Japan Between 31st August and 17th September 1983.*

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1. Jayapalan, V.I.S., *Socio-Economic History of Jaffna* (in Tamil — unpublished), Dissertation submitted to the Department of Economics, University of Jaffna, 1980.
2. Moothoothamby Pillai, A., *Jaffna History, 1912.*

Appendix VI

1. Srinivasan, K.R., 1946 and 1960, *op. cit.*
2. Sitrampalam, S.K., 1980, *op. cit.*
3. The *Pūta* worship, a developed form of animism, can be cited in the *Caṅkam* Tamil literature (see *Paṭṭiṉappālai* and *Cilappatikāram*). Later, this was syncretised with the worship of Siva, as Siva himself became *Pūtanātan* (chief deity surrounded by *Pūtas*). *Pūta* cult is still found in Kerala.

   "Vētam ōti veṇṇīraṇintu veḷḷai erutēri
   Pūtam cūḻap poliya varuvār puliyiṉ uritōlār".

   — *Tēvāram.*
4. The Dutch church inside the Jaffna Fort and the one at second cross street, Jaffna city.

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